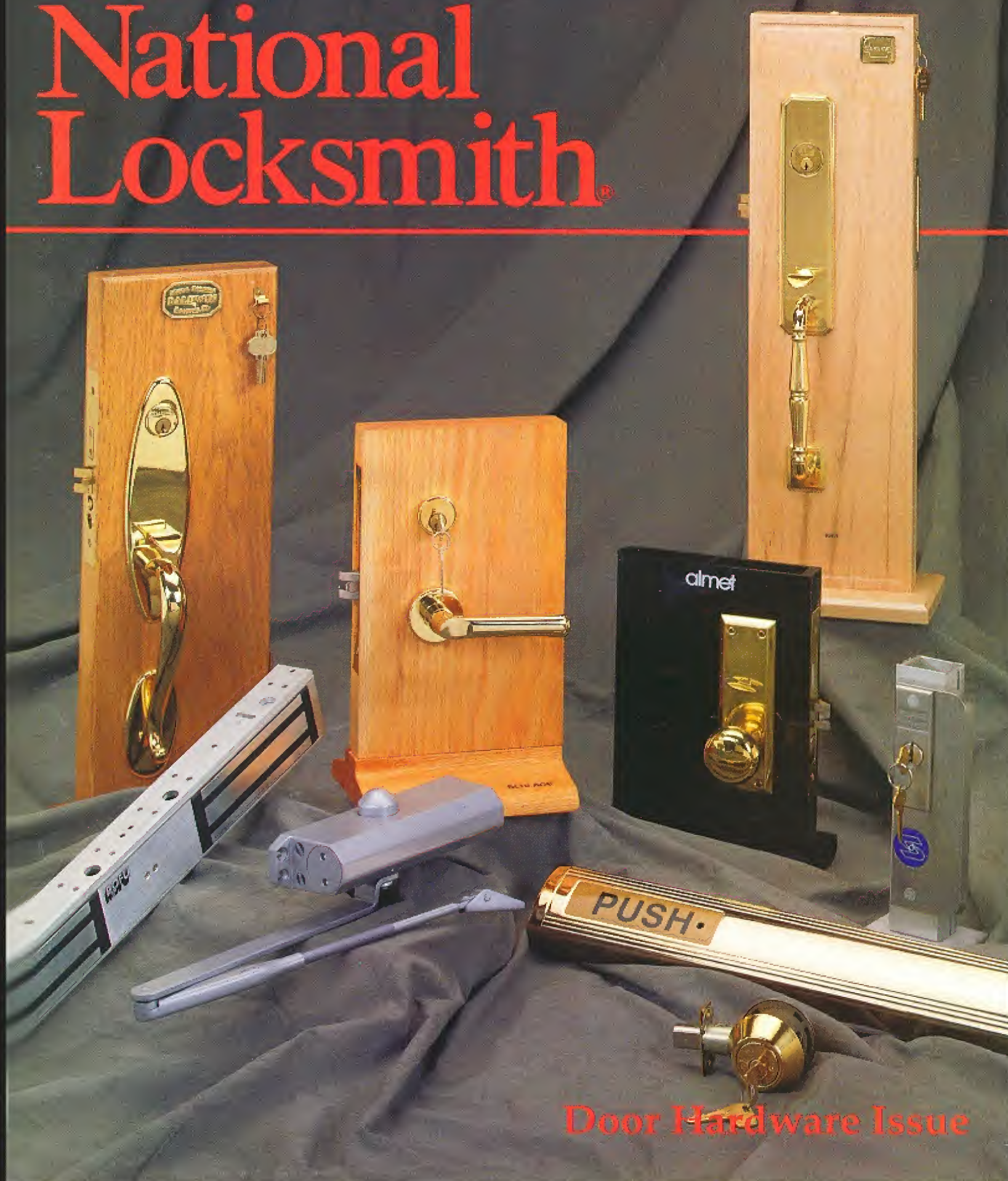


April 1993

The National Locksmith®



Door Hardware Issue

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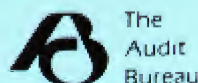
On The Cover

This month's cover features door hardware products from the following companies (in alphabetical order): Almet Hardware, Baldwin Hardware, Dorma Door Controls, Dor-O-Matic, Master Lock, Omnia Industries, Rofu International, Schlage Lock Co., and Scotsman Security Products. Look for information on these products and many other door hardware products in our Product Review section, page 42.

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Commentary

Marc...On Exams, Your Vote & Taxes!

Wow! Talk about an enthusiastic response! As I write this *Commentary* the March issue has only been on the street for a few days. Yet *hundreds* of you have already completed and mailed in your Security Certificate Program tests. Most of you, I am glad to say, have taken a lot of care in completing the exams, and a high percentage of you are passing the tests. However, very few locksmiths have passed their exams with perfect scores. Most people are missing at least several questions.

Considering that these exams may be taken as open book tests, I believe this indicates that the questions do require some thought and understanding in order to provide the correct answer. Congratulations to those of you who have completed your tests. And for the rest of you, what are you waiting for?!

A Letter to the Editor is published in this month's magazine commenting on the photograph which appeared on page 38 of last month's issue. This was the photograph of a tuxedo bedecked locksmith and a lovely model, introducing a product review section.

I have always thought that the product review sections, while important, are a bit dry. The staff here believes that an occasional photo introduction, like in March, will help liven up this section of the magazine.

What do you think? Of course, you, the readers have the most important opinion of all. So, let's have a vote! If you believe that we should continue to feature the occasional photographic introduction to the product review section, cast your YES vote by circling number 286 on this issue's Rapid Reply Card. To vote NO to more photo's like in March, circle number 350 on the Rapid Reply card.

Since I pledge to release the count and abide by

your decision, it is really important for you to cast your vote. The results could easily be swayed here by people who are strongly opinionated either one way or the other. The only way to insure that your voice is heard to vote. So rip out that card and send it in today.

By the way, I sound like a commercial for voting. In the United States a lot of people like to complain, but many of them don't actually bother to vote. I commented on this to Mark Johnson from Locksmith Supply Company of North Melbourne Australia. He told me that in Australia, if you do not vote, you must pay a fine. If I recall correctly, the fine is about \$40. That's a serious penalty for not expressing your opinion. Of course, the most serious penalty of all is not to be heard.

As the year progresses, home sales have increased, unemployment has decreased some, and the economy seems to be on the mend. This recovery, however, appears to be going slowly and it needs all the help it can get. Clinton proposes stiff tax increases to reduce the deficit. Fine. We're probably all willing to pay more. But I think he will have a revolution on his hands if he does not reduce government spending at the same time. Do you want to pay more just so the Congress has more with which to buy \$600 toilets? To solve the deficit crisis, they may need to tax more, but they sure need to spend *less*!



Marc Goldberg
Editor/Publisher

April 1993 5

Seroogy Speaks...

Notes From the Managing Editor

The other day I watched as a locksmith worked on his first Saab 900. The ignition cylinder was bad and needed to be replaced.

For a locksmith experienced with this car, removing the cylinder (located between the driver and passenger seats) is a quick, uneventful tour of Swedish engineering. For the inexperienced, it's a slow, arduous trip through hell.

As he removed the last cover from the center console, I suggested we remove the shifter assembly so I could show him how to replace a lockout gear commonly broken on the standard shift models.

Pointing out the odd shaped fasteners that held the assembly to the car, I recommended using a hammer and scratch awl to back the tri-pointed nuts off of the bolts.

Without hesitation, he grabbed a long, heavy pliers.

"I want the hammer and scratch awl," I said. I am the teacher.

"Just try this, it'll work," he retorted. Obviously not accepting my answer, or his role as student.

"Okay, try it!" I said sitting back, crossing my arms, and anticipating the destruction of a perfectly good tool (all the more gratifying because it was his).

The pupil leaned over the shifter and grabbed the nut with the pliers. Gingerly and progressively applying pressure, the pliers began to twist.

"Well?!" I flouted.

The nut broke loose and spun free.

The incorrigible disciple turned and grinned, holding a perfectly good pliers.



Tom Seroogy

"It never did that for me." I said sheepishly.

Warning to teachers and students, students first:

Students, remember that the teacher is the teacher because of his experience and knowledge, not because he's perfect; respect that.

-Remember, the teacher rarely receives proper compensation. The lesson he got paid for once, may mean a lifetime of additional income for you, respect that.

-Remember, the procedures and methods taught by a teacher are based on his experience. Alternative methods not included probably did not work as well for him. Alternatives are a decision of preference not of competence. Respect that.

-Remember, the teacher is there for *your* benefit! Respect that.

Teachers:

-Remember you are not

omniscient. Treat your experience as "your" experience and not those of your student. Respect them.

-Remember, students are people. They have brains and they have feelings. Respect them.

-Remember, you were once a student yourself, having the same fears and feelings of inadequacy. Respect them.

-Remember, sometimes alternatives *do work!* Except in matters of safety or where costly damage is imminent, never say "never" to a student's alternative. Respect them.

-Remember, allow room for your student to try things his way, to try new ways of doing something, to use his mind and not yours, to make mistakes. Respect them.

-Remember, learn from your student, be a student. Respect them.

-Remember, you were placed on a pedestal to raise others to a higher level, not so you could talk down to them. Respect them.

And, finally,

-Remember, your pedestal is only as high and strong as the people that build it and put you there. Respect them. §

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Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

Reader Objects To "Girly Picture"

Dear Marc:

Today I received the March 1993 issue of *The National Locksmith*. I am very happy to be receiving your publication and look to it for very readable and interesting professional information.

However, when and if I ever come across pictures such as the one that appeared on page 38, that of Tom Mazzone and the model, Nancy Pierson, I remove them and deposit them in their proper place (the garbage). I just thought that you should know how I feel. If this type of picture is a signal of a new direction for *The National Locksmith*, then you can expect to lose me as a subscriber. I intend no offense toward Mr. Mazzone or Ms. Pierson and I realize that you may get another 100 letters expressing approval of this. Please consider that your direction in this area may encourage men to always be looking for the "girly pictures" (wives usually do

not appreciate this). Women who do not wear enough clothing are a snare and a distraction to the eye. I want to keep my eye for my wife alone. I hope that you feel that your magazine is more professional and successful than to have to use glossy girl photos to maintain popularity.

Scott Rieger
Illinois

Editor's Note: Scott, I respect your opinion. Please read my Commentary and cast your vote on this subject. Thanks for writing.

'Students Should Be Seen But Not Heard

Dear Marc:

In reference to recent articles by Jake Jakubowski we must say we are disappointed that our trade magazine would give prominence to views that locksmiths are trying to overcome in the quest for a professional image for our trade.

Specifically we object to the suggestion that students should begin advertising that they are locksmiths rather than working for a lock shop to gain the experience that will be vital to their success and the security of their customers.

If you are having problems landing a job in a lock shop, you should be looking at what you are offering to that shop. The number one skill that will be of value

is key identification. The stronger you are in key identification, the less help you will require with key duplicating and that will be of value to the owner of a busy shop as the largest volume of customers are those wanting duplicate keys. It is important that you are open to information and training, and that you don't try to impress anybody with your vast knowledge of the trade. Don't offer to do things until asked and never be pre-emptive when you are being given instructions even if you know how to do what you are being shown, you never learn new tricks if you won't watch. There is not one locksmith who can't learn new and better ways by listening to other experienced locksmiths.

For 17 years I have worked in lock shops of every description and owned a few and still I enjoy the end of the day when fellow locksmiths share the nightmare of the day.

The impossible safe, the frozen pivot on an overhead door closer, finding that fluorescent lights can make the card reader crazy, the wonderment of a government job requiring that an electric strike be mounted in a concrete filled steel frame rather than an electrified mortise lock in an existing cavity, the cars, the tools, etc.

You don't have to please everyone, just yourself. Be a professional, it pays.

Art Kuperstock
California

Editor's Note on page 109

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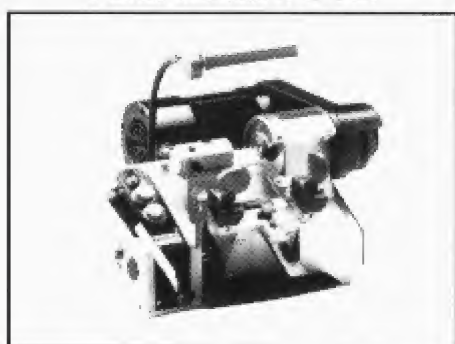
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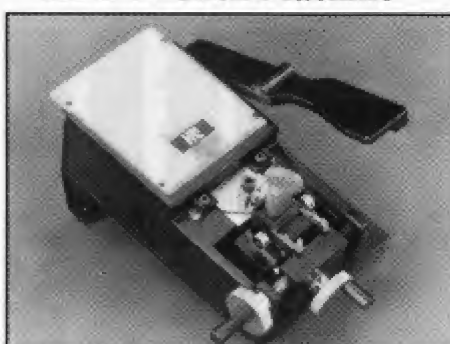
Silca's Bravo USA



First Prize

Locksmith designed, the Silca Bravo USA is a quality semi-automatic duplicator. Four-way jaws hold even the smallest keys as this. One of the most accurate key machines on the market.

HPC's Punch Machine™



Second Prize

The Punch Machine™ (1200PCH) is HPC's newest addition to the 1200 series key machines. It works on the same principle as the 1200CM, making it quite versatile. It is also very accurate and completely portable.

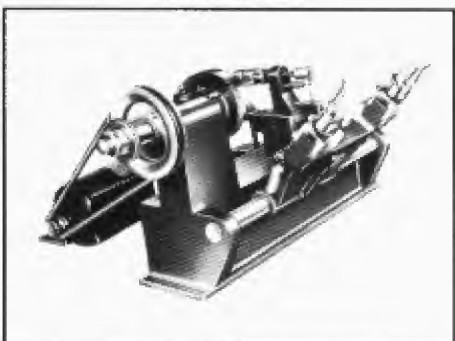
ESP 5000



Third Prize

The model 5000 key machine can be used for manual cutting or, with the flip of a switch, it will cut keys automatically. It is designed to accommodate large head keys such as hotel and foreign auto blanks.

Belsaw 200



Fourth Prize

Duplicate, cut by code, cut flat steel keys. Complete machine with motor, three cutters, guides, and instructions. Built-in micrometer.

HPC 9120



Fifth Prize

HPC's most compact key cutting machine features reversible jaws. Double-sided copy dog cuts flat steel and safety deposit keys and has softy brush. Excellent versatile machine.

\$100 Cash & Flat Rate Manual

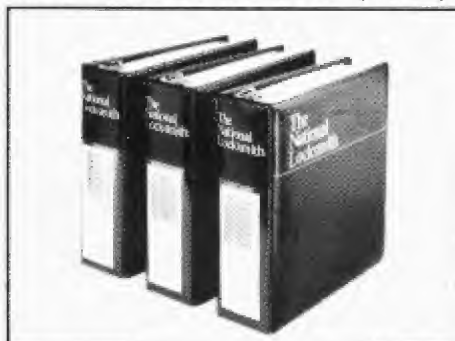


Sixth Prize

\$100.00 in cash will brighten your day! So will the *Flat Rate Manual for Locksmiths*. The manual will help you price your services for profit. You won't ever have to guess how to price again.

Code Books From The National Locksmith

General Code Book Set (NGCB)



Seventh Prize

These three books contain 450,000 codes covering domestic lock and automobile codes.

Padlock Code Book Set (NPCB)



Eighth Prize

These three volumes offer 462,000 covering Dudley, American (Junkunc), Master and Yale.

Foreign Code Book Set (NFCB)



Ninth Prize

This two volume set holds 432,000 codes for the complete variety of foreign codes, from Alpha Romeo to Yugo.

Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Robert Sieveking

April's Best Tip

This Technitip concerns the removal of the Schlage removable core cylinder from an ILCO Simplex 1000 series lockset. One model of this lockset uses the Schlage removable core type cylinder in the outside knob, to bypass the press button combination portion of the lock. If you are called to service this R/C cylinder, the following tip will be of interest to you.

The core removal key for this cylinder is normally cut on a special extended blank. The blade of the six pin blank is not long enough to actuate the spring pin mechanism, at the rear of the cylinder, to retract the core retaining lug. The method that I have found, allows a six pin

blank to be modified to operate as a core removal key. Simply file back the shoulders of the six pin blank, as you see in illustration one (*on next page*), to effectively lengthen the blade by approximately 1/16". Then duplicate a working key over the modified blank, being careful to leave the tip of the key uncut. The operating key will then be long enough to actuate the spring pin at

the rear of the cylinder. Push in on the key, rotate it clockwise about 22 degrees, and pull the cylinder out the front of the knob. This method worked with the Schlage R/C cores that I have serviced. I hope it helps another locksmith that is asked to service one of these locks, and doesn't have a core removal blank.

Brad MacKenzie
Ohio

These Prizes Awarded Each Month!

All-Lock A-7000 VATS Decoder
HPC Pistolpick
Silca Rubberhead Keyblanks (100 blanks)
ESP PR-13 Professional Lock Pick Set
Sieveking Products EZ-Pull GM Wheel Puller
Fort Lock Merchandise Rack
Submit your tip and win!

How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to The National Locksmith. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sieveking, Technitips' Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will not be eligible! So get busy and send in your tips today. You may win cash merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

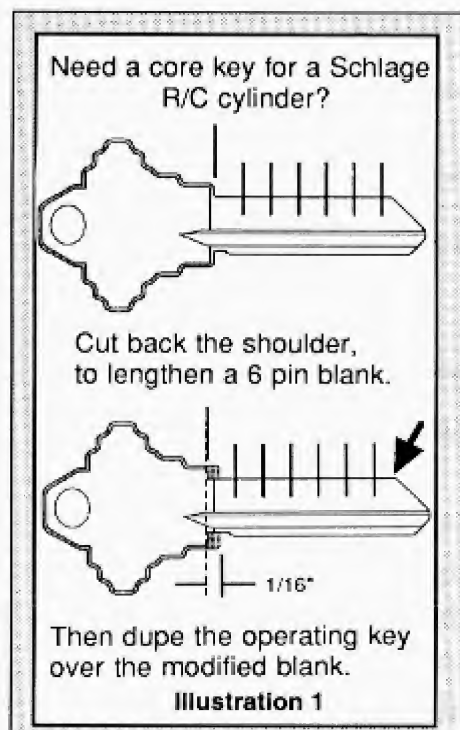
Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1992? Enter today! It's a lot easier than you think!

Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker and decal. Plus you are now eligible for the really big prizes!

Best Tip of the month prizes!

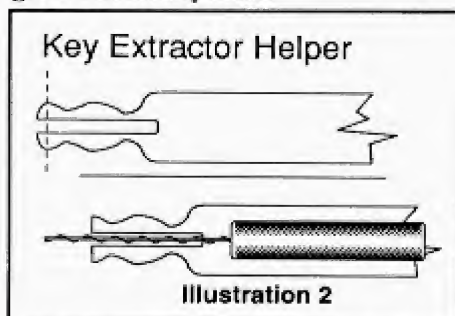
If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a Bonded Locksmith bumper sticker, decal and a Locksmith Cap. Plus, you may win one of the annual prizes.



All-Lock Vats Decoder Winner

I have found the following Technitip to be very useful when removing broken double sided keys from automotive locks.

Illustration two shows a double sided lock pick. The tip of the pick has been cut off square, as you see in the bottom drawing. When extracting a double sided key with a spiral extractor, the wafers that are in front of the broken piece of key will prevent it from being extracted. The double sided pick is used to push back the obstructing wafers and steer the broken piece up the keyway. The center of the pick is cut away, so the extractor is not hindered from entering a groove in the key blade.



Insert and turn the spiral extractor into the keyway as usual. Try to keep the extractor as close to the center milling as possible. Insert the pick into the keyway, until it contacts the broken key. Grasp the extractor and pick together, and pull the key straight out of the keyway. In some cases, you may consider making a "pick" from a key blank which fits the lock you are servicing. Cut-away or groove the blank to allow the extractor to

enter easily beside the blank. This modified blank will "hold open" a shutter or key alarm switch for better access and easier extraction.

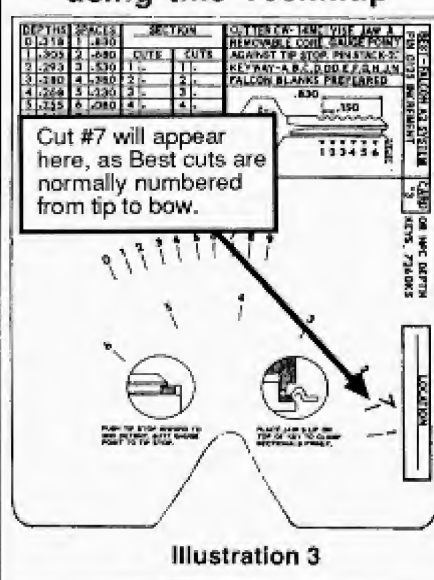
Tom Spangler
Oregon

HPC Pistolpick Winner

I would like to suggest a Technitip that I have found very useful in originating Best 7 pin keys on my HPC 1200CM. The carriage travel of the 1200CM is not sufficient to allow the cutter to make both the first and seventh cut of a Best 7 pin key. There is simply not enough cross travel. Because I support a Best system that uses 7 pin keys, I have a need to originate these keys quite often. The solution is quite simple. Make cuts 1 thru 6 using the normal tip stop and Continental Code Card #3, then move the key and make the seventh cut. Use the Ford 10 wafer tip stop to gauge the under-side of the Best key as you did with the normal stop, and make the 7th cut.

The seventh cut can be located by using a Best 7 pin key, and aligning the cutter in the key cut. You can also use the micrometer card (number 58), and set the carriage at .180". Remove the micrometer card and re-insert the Best card to make the cut. To speed up the key cutting, you can easily mark the Best card (Card #3), as you see in illustration three for the location of cut number 7. This Tip will increase the utility of your 1200CM code cutter and allow you to cut 7 pin keys without a

Cut #7 can be cut on your 1200CM using this Technitip



special clipper.

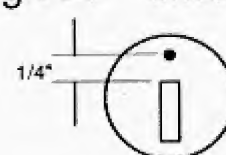
Vaughn Keaton
Maine

Silca Keyblanks Winner

My Technitip concerns the removal of the new '93 Chrysler "module" ignition switch from the auto without disassembling the steering column. (This lock reminds me of the old "in-dash" GM ignition)

First drill a small hole in the face of the cylinder, as you see in illustration four, approximately 1/4" above the keyway. Pick or use a key to rotate the ignition cylinder one click

'93 Chrysler "module" ignition removal Tip



eliminates column "tear down"

Illustration 4

counterclockwise. A small spring pin will come into view in the drilled hole. Push in on the spring pin with a stiff wire, and continue to rotate the ignition counterclockwise. The plug will turn a few degrees and can be removed out the front of the cylinder. Be careful not to lose the buzzer actuator when removing the plug. After repairing or recombining the cylinder, reinsert the plug and rotate it clockwise to lock it in place. Keep the drilled hole size to a minimum. You can either service the old cylinder and repair the hole, or replace the plug with a new one. This Technitip bypasses all the disassembly of the column normally associated with ignition replacement. Work smarter not harder. Good Luck.

J.F. Nowacki
Michigan

ESP Pickset Winner

This Technitip is for a simple way to prevent keys from flying off their hooks, either in your mobile shop or in my case shop.

I live in San Francisco Bay area. After the last big "shake-up," "I had a few hundred keys to sort and re-hang. While I was sorting and stacking things that had been moved around by mother

Continued on page 14

Continued from page 12

nature, I came across a roll of 1/8" clear plastic vinyl tubing. I am constantly criticized for keeping just about anything that is left over, found, or inherited but this time I had found real pay dirt. I cut the tubing into 1/2" long pieces, and slipped the short pieces over the tips of the key hooks as they were restocked with keys. The tubing fits snug enough to prevent any keys to be slipped of the hook. In the truck, these "keepers" are invaluable. Not a single key has been thrown from a hook in some time. I hope this Technitip helps another locksmith that

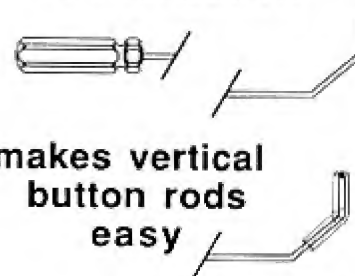
is having similar problems.

Charles Frazer
Shaky Town, California

E-Z Pull GM Wheel Puller Winner

This Technitip is for anyone that uses a lockout tool similar to the one shown in illustration five. You may recognize this tool from the Steck opening kit. Steck recommends reversing a piece of duct tape and wrapping it onto the tip of the tool for lifting vertical buttons, but the tape is always picking up dust and losing its

Steck straight tool modification



makes vertical
button rods
easy

Illustration 5

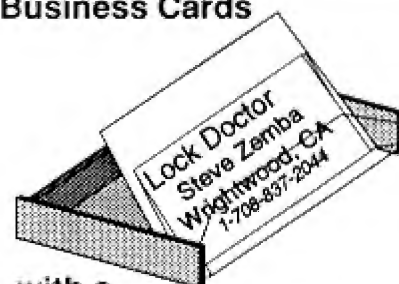
"stickiness." It is also a pain to remove and renew. I decided to find a piece of surgical rubber tube to fit the tool. The 1/8" tube is perfect. It can be slipped onto the tip of the tool, as you see in the illustration, and will not come off in use. You may want to run a little soapy water through the tube before slipping it over the rod. This will lubricate the tubing until the water dries, leaving the tube with a firm grip. The consistency of the rubber makes a good grip on most lock rods. Clean the rubber from time to time, to maintain the grip. Use this Tip on the end of your under glass tool to give a better grip on the lock buttons and prevent scratching the auto trim on the inside of the door. The "Sticky Steck" is the best solution I've found, for most unshielded vertical button rods. Good Luck.

Paul Bottando
Illinois

Fort Lock Display Panel Winner

This Technitip will make a nice addition to your front counter. Display your business cards at the check out or cash register, in a cassette tape box, as you see in illustration six. The clear plastic top has been removed and reversed in the top, to make the card

Display your Business Cards



with a
Cassette Tape box
Business Card holder

Illustration 6

NATIONAL AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

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Continued from page 14

display. Adjust the angle of the clear half of the box, and super-glue it in place. The cards are neatly displayed at an attractive angle, and will be easily accessible to anyone that wants one. This is a "no cost" Tip.

Steve Zemba
California

Here is a Technitip that I've been using with good results. By modifying the pin tweezers, as you see in illustration seven, the back side of the tweezers becomes a clip removal tool. I have modified the tweezers to form a hook. The hook is ground to a thickness that fits easily into the groove of a lock cylinder plug. By hooking the

clip with the tool, the clip can be removed. By using only one tool to disassemble a knob lock cylinder, I save time and eliminate wasted motion and searching for a clip remover or small screw driver. This Technitip will save time.

Steve Beaupre
Massachusetts

This Technitip is one that I discovered, or rather invented, to cover a special need the other day. The problem was that a customer had left the lights on in a Fiero, and had let the battery run dead. The lock on the rear deck lid had an electric operator, but without the battery power, the release would not operate. The lock cylinder in the rear deck had not been used in so long, that it was impossible to operate. Breaking into the lock or damaging it would have been difficult and expensive, but I had a better idea. I had read about a trickle charger that plugged into the cigar lighter of the auto, which allowed the battery to be charged without connecting directly to the battery, so I applied this same technique to jumping the battery. Using a length of two conductor wire and a

cigar lighter plug, I connected a good auto battery to the Fiero, I touched the trunk release, and it popped right open.

I suggest you use care in wiring the plug to the correct polarity, and fuse the plug to avoid shorting something. Most cigar lighter plugs will have an in-line fuse inside the plug. This is the same "plug and wire" tool that can be used to open electric trunk releases when keys are locked in the trunk.

Joseph N. Mastrota
New York

When decoding the new "squeeze" type GM glove box locks, it is not always necessary to remove the lock plug to read the wafers. If you read wafer locks, you should have no problem reading the four wafers in this cylinder. If you have not mastered wafer lock reading, you may find that the face of the lock case, that surrounds the plug, can be removed. This allows a clear view of the wafers, from the front. Insert a blank into the plug, and read the wafers from bow to tip, as the key is inserted, one wafer at a time. This method will work whether

Continued on page 18

Pin Tweezer Mod. to increase utility

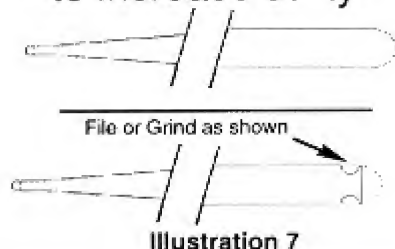
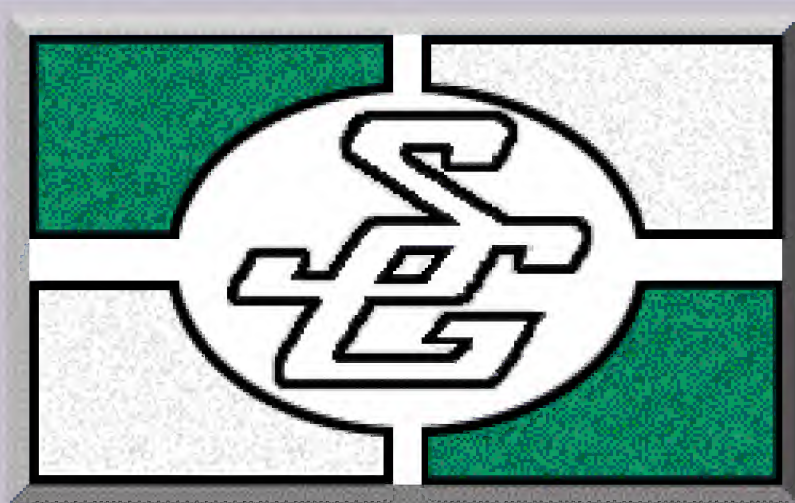


Illustration 7



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technology...tradition.**

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Continued from page 16

the lock is in the locked or unlocked position. Be aware that not all glove box locks can be disassembled this way. Reading the tumblers through the keyway is by far the easiest method.

John E. Steiner
New York

CORRECTION

The Technitip printed in the March issue, by R. Lazich was only marginally correct. Though it is true that the Saturn keyway is the reverse, or mirror image of the new Chrysler keyway, and the depth and space specs are identical, the door lock cylinder wafer placement is different. This is what I found.

1. In the 1988 to '92 seven wafer Chrysler door cylinder, you will find wafers in positions "2, 3, 4, 5, and 6" only.

2. In the 1993 seven wafer Chrysler door cylinders, the wafers will be found in positions "1, 2, 3, 4, and 5" only.

3. In the Saturn seven wafer door cylinders, wafers will be found in positions "3, 4, 5, 6, and 7" only.

Simple duplication of these tryout sets will probably be less successful than we had originally hoped. Thank you for your understanding.

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Newsletters

New Products and Industry News

Creative Products' 7-In-One Screwdriver

Creative Products, Inc. introduces the SK-10, a compact, ratcheting seven-in-one screwdriver set with assorted 1/4" hex drive replaceable tips, carried in a convenient, removable on-shaft caddy. The reversible, unbreakable polycarbonate ball handle is a patented U.S. product, (lifetime guarantee) and is recommended by doctors for people with arthritis, tendonitis or a similar ailment.



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Key-Z Key Control Software

Key-Z is new key control software that takes the guesswork out of key inventory management at a price

that's affordable. From "who has which key?" to "which key opens which door?" to "what's been lost or stolen?" Key-Z keeps customers informed with immediate answers to all their questions. Key-Z gives all the details needed at the touch of a key: holders of keys, key whereabouts, transaction receipts and summary



reports.

Key-Z is easy-to-use, too. The software runs on a basic IBM or compatible and is so straightforward that a manual is usually not needed. Help is never more than a keystroke away.

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'LaKey' By Kustom Key

Kustom Key, Inc. introduces its new specialty line of key blanks called "LaKey." These large head key blanks are attractively embossed in brass. The graphics make them popular with the stylish-minded customer and being so easy to handle makes them perfect for handicapped individuals.

Available in small quantities in the following keyways: KW1, AR1, SC1, DE1, WK1, WR3, and Y1. A starter kit is available complete with a colorful counter display and window poster that attracts the attention of your walk-in traffic. LaKey is available direct only from Kustom Key.



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Continued on page 22



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Continued from page 20

Stanley's Compact Gate Opener

Stanley Door Systems introduces a swing gate operator for light vehicular swing gate applications that is compact enough to fit on most gates, specifically, those that lack the space to place a traditional gate operator.

The new Model No. 400 operator is powered by a sealed lead acid 12-volt battery that can be charged from either a transformer or solar panel, and features a built-in trickle charge circuit with a separate control box that can operate a single gate or a pair

of gates working in tandem. It mounts easily to the gate, and its small size and sleek design allow it to blend into any landscape environment.

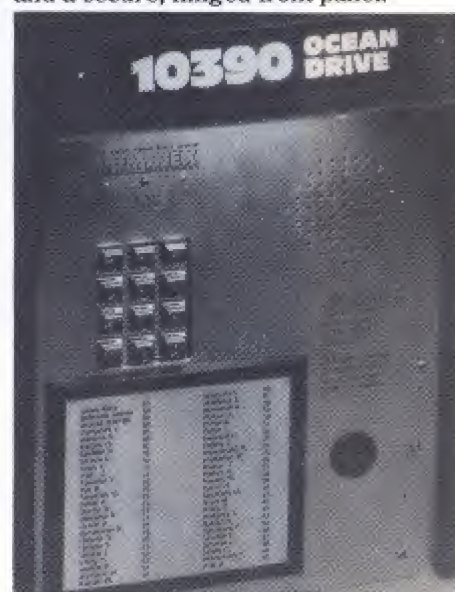
For FREE Information
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Wireless Luminex By Amtel

Wireless, unattended visitor screening at the lobby or gate entrance is now possible with the Luminex phone entry system. Visitors simply dial a two digit code (from the built-in directory) to talk to the

resident, who in turn can press "9" on any of his telephones, to open the door or gate.

Luminex offers hands-free communication, metal keypad, LED indicators, tele-programming, battery backup, rotary or touch tone dialing and a secure, hinged front panel.



For FREE Information
Circle 430 on Rapid Reply

New Easikey By Radionics

Radionics has announced that its convenient Easikey electronic key access control system is now available exclusively from the company's nationwide network of authorized dealers.

The Easikey system provides convenient and affordable access control for both interior and exterior doors without metal keys, push button keypads or the need to memorize numbered codes. Ideal for commercial, residential and industrial access control, the system is comprised of electronic keys, a reader for each protected door, and a door controller which can be placed up to 300 feet away from the corresponding reader. Each controller can manage two readers.



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Continued from page 22

Power Line Safes By U.S. Security Safes

New from U.S. Security Safes is the B-Rated Power line, which includes four of the most popular sizes in today's market. High tensile steel and uniform body construction along with a unique front fold design, gives this safe a more advanced look in security. Ideal for cash tray storage and temporary holding; this product is used in supermarkets, fast-food operations, small retail outlets, restaurant, clothing stores and many more applications.

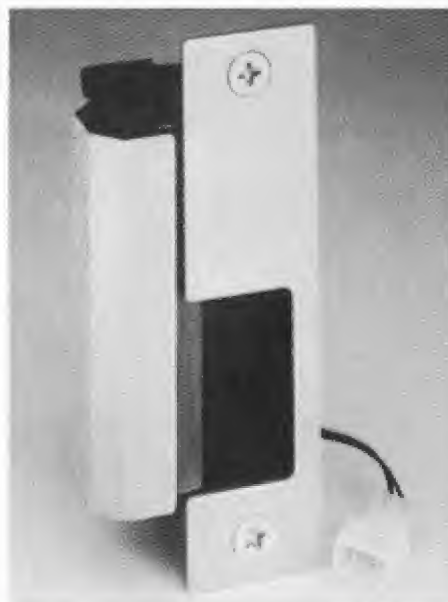


For FREE Information
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SDC's 16 Series Electric Strike

A redesigned 16 Series line of electric strikes for the wholesale market was introduced by Security Door Controls (SDC). Designed to accommodate most types of locksets, the SDC 16 Series is made of stainless steel construction, offering corrosion resistance, strength and durability.

Architecturally aesthetic, the 16 Series has a forcing strength in the



open direction of 2,300 pounds versus the UL minimum of 1,200 pounds, and a durability minimum of 500,000 cycles versus the UL's 100,000 requirement.

The SDC 16 Series incorporates the special "D" series units into the total option design, making it non-handed and completely interchangeable.

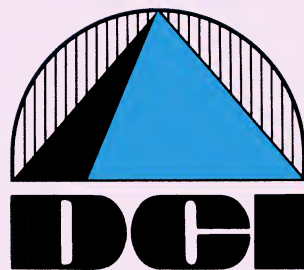
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Fundamentals of Master Keying From ALOA

The Associated Locksmiths of America, Inc. (ALOA) is proud to offer *Fundamentals of Master Keying* by Jerome V. Andrews, CML, for sale to the locksmithing public. Written in simple layman's terms, *Fundamentals* breaks down the entire process of split pin master keying into its most basic element. It explains and conforms to ALOA and DHI standards and terminology.

Andrews draws upon his vast knowledge of the industry in writing this book. He has been involved in locksmithing on various levels for over 25 years and is currently Key Records Manager & Director of Training for KABA High Security Locks.

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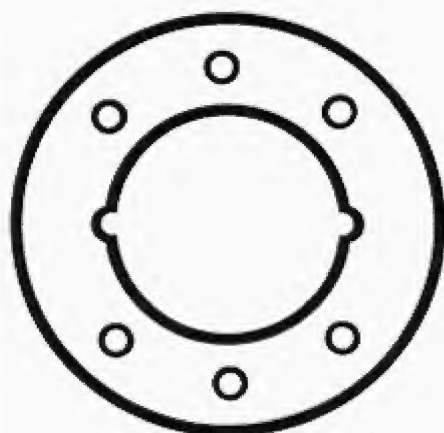
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New Don-Jo Adapter Rings

Don-Jo Mfg. has recently announced the addition of its most recent product, the AR-335. This new series of adaptor rings is designed to allow Grade 1 key-in-levers to be used on 1-3/8" doors. The outside diameter is 3-1/2" and the hole locations will fit Arrow, Schlage, Russwin, Yale and Sargent levers. They are available in three finishes: aluminum, brass coated and duronodic.

They come polybagged and are sold in pairs.



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New Weiser Clear Packaging

The new clear packaging and color-coding system of Weiser Lock knobsets enable consumers to be confident they're purchasing an attractive and quality product that is appropriate for their particular needs. Customers can easily find what they're looking for with Weiser Lock's new color system: red for front and back doors; blue for bed and bath; green for hall and closet; and purple for WeiserBolt products.



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RF-50 Vehicle Alarm By AutoPage

The new vehicle security alarm system, AutoPage "RF-50" is a showcase of AutoPage's technological know-how.

The RF-50 comes with two 2-button, 3-channel, 10-function remote control transmitters.

Standard features include: microprocessor controlled code reading system; permanent code memory; use of up to four transmitters; over half a million codes; multi-vehicle operation from one transmitter; super miniature SIS-5 glass/shock/motion sensor; starter interrupt; remote door lock/unlock; trunk release; dome light supervision; and pre-warning sensor input.



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Test Article #10 General Security

To be tested in June 1993 issue.
Details in insert in front of issue.

Arrow Mortise Lock

"This article is part of our Security Certificate Program. In a future issue, the content will be tested."

Arrow steel case mortise locks include the "A" series for knob trim, and the "B" series for lever trim. This article will take a look at the differences between the two series and cover an assembly of the function 11 or front door function B series lock. Parts catalogs are available from local Arrow distributors.

While many of the internal components for the same function lock can be swapped between the A and B series, the B series does include a few more internal components and additions to the case and case cover. The only component that cannot be interchanged is the inside hub.

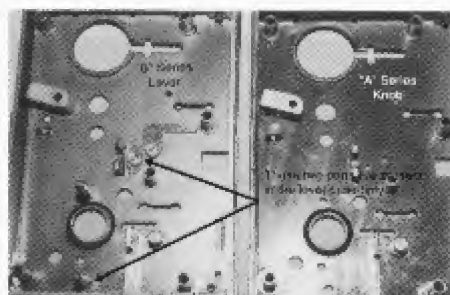
Because the knob trim uses a split spindle with the outside spindle larger than the inside spindle, the inside hub will have a smaller spindle hole dimension (9/32") than the outside hub (5/16"), generally the locking hub. On the lever trim, however the outside and inside spindles are the same dimension and so are the hub spindle hole dimensions (5/16").

The B series also includes a total of four extra components to assist with the extra torque characteristic of lever trim, plus a fire stop lever. The fire stop lever prevents the latch from retracting in a high temperature fire should debris fall on the lever.

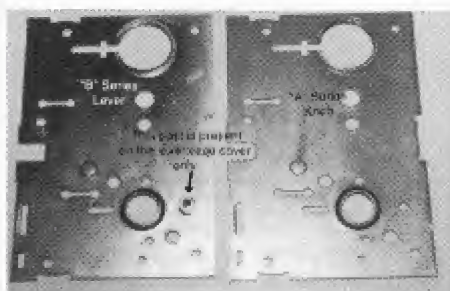
Both series locks have a 3/4" throw, two-piece, anti-friction latch. Deadbolts have a 1" throw on locks that have them. (See photographs 1, 2, 3 and 4.)

One of the nice features of the Arrow unit is its simplicity. In fact, the unit that this article covers has only 22 removable components for the B series and 19 for the A series. As assembly for both series is identical except for the few added parts in the B series, assembly is made to the B series unit.

1. Starting with an empty case (see



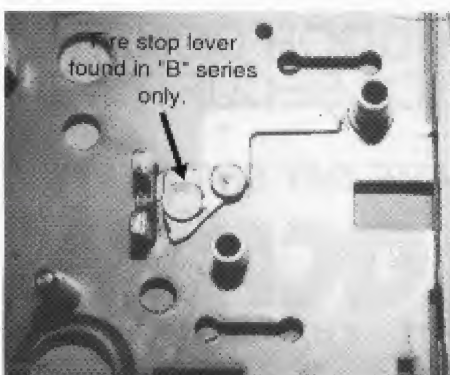
1. Only minor variations exist between the lever and knob series lock



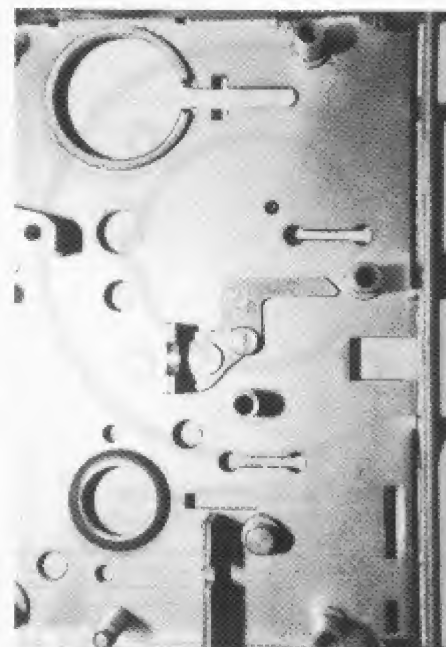
2. Minor differences make upgrading the knob trim to lever impossible.



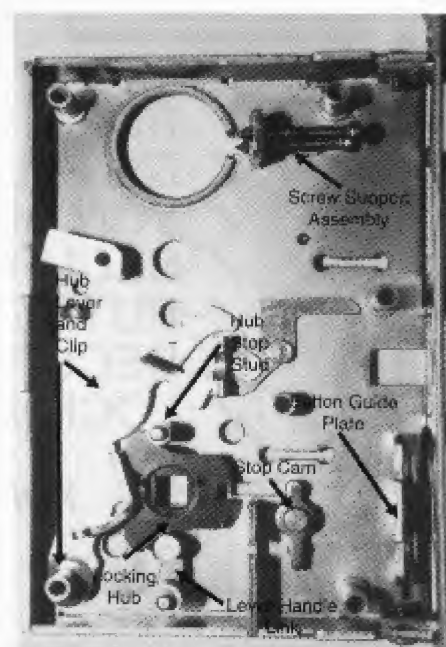
3. These parts are also included in the lever and not the knob trim lock.



4. The fire stop lever is required on the lever trim to meet UL approval.



5. Empty lever case.



6. The first layer of parts is installed into the case.

Continued from page 26

photograph 5) install the screw support assembly, hub lever and its retaining clip, lever handle link (lever only), hub stop stud (lever only), button guide plate, stop cam, and the hub. (See *photograph 6*.)

The stop cam must go in the correct way. The shorter side with a large single ball should point to the top of the case. The longer side with a smaller ball and extended tip points to the bottom of the case.

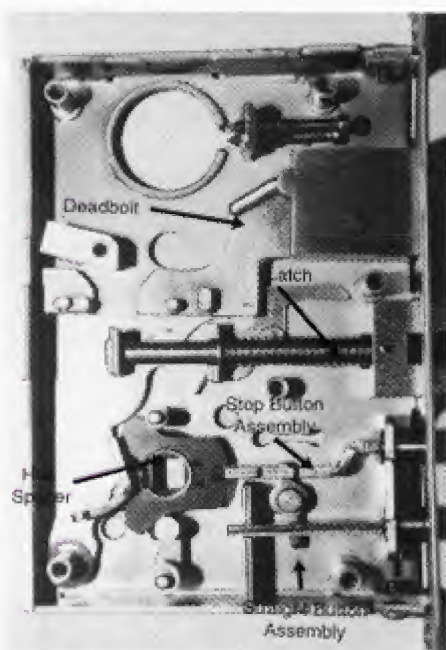
Also, there will be two hubs to choose from. The larger hub with a slot in it is called the locking hub and has a 5/16" spindle hole dimension for both lever and knob trim. This hub must be placed to the side of the case that will be on the locking side or outside part of the door once the lock is installed.

A smaller hub, without a slot, is called the plain hub. This hub goes to the non-locking side of the case and comes in two dimensions: 5/16" for lever trim and 9/32" for knob trim.

For this article, the locking hub is placed into the case first.

2. Install the hub spacer onto the hub in the case, the stop button assembly and the straight button assembly, the deadbolt and pin assembly, and the latch assembly.

Remember to have the latch facing correctly for the handing of the door. The spring and washer on the latch rod must sit in front of the saddle it sits in, and the end of the latch must rest behind the hub lever. (See *photograph 7*.)



7. The simplicity of the Arrow lock makes assembly easy.

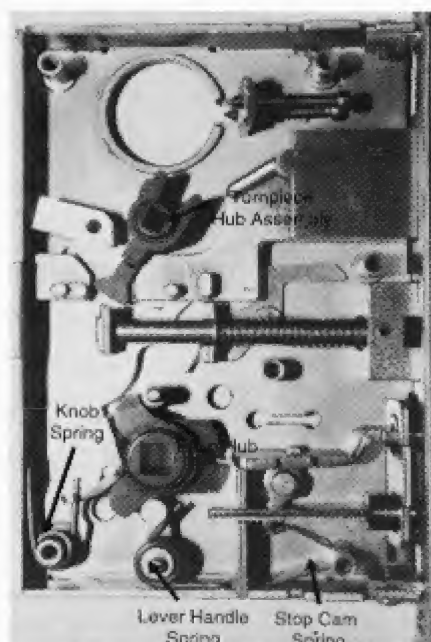
3. Install the second hub, turnpiece hub assembly, and the three springs: stop cam spring, knob spring and lever handle spring. These springs go on one-way only. (See *photograph 8*.)

4. Install the deadbolt spring. This also goes in one-way only. (See *photograph 9*.)

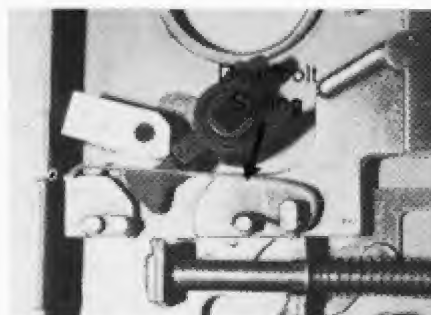
5. Finally, install the latch lever assembly and the stop lever assembly. (See *photograph 10*.)

You may have noticed that this unit does not contain a guardbolt or deadlatch. The deadlatch function is accomplished when the deadbolt is in the locked position. When locked the deadbolt forces the stop lever assembly to slide the stop button assembly into the locked position, deadlatching the outside hub in the locked position.

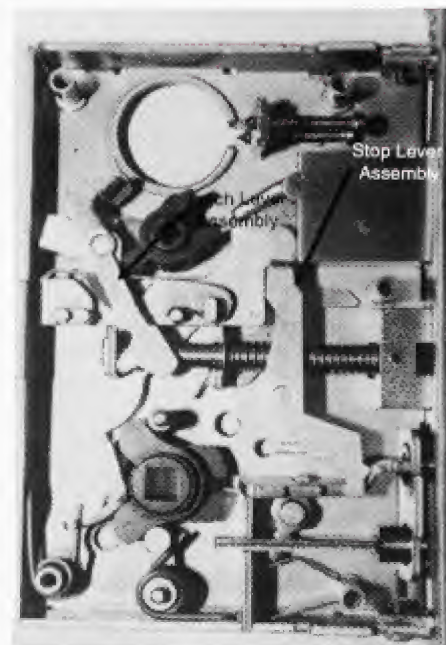
6. With all the components in place, set the case cover over the case and secure with the five case cover screws. §



8. The second hub, turnpiece hub assembly, and three springs are next in line.



9. The deadbolt spring is a little tricky to install. Make sure it is seated properly.



10. After putting in the final two parts the job is done. Notice that the lock does not have a deadlatch. This is typical of most Arrow mortise locks. The deadlatch function is achieved when the deadbolt is thrown.



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Test Article #11 Automotive Security

To be tested in June 1993 issue.
Details in insert in front of issue.

Honda Door Lock Service

"This article is part of our Security Certificate Program. In a future issue, the content will be tested."

Last issue spent time describing the removal of ignition and door locks commonly found in Hondas from 1982 to 1993. This article describes the servicing of the four basic door lock styles found during those years.

Before servicing, however, it is wise to be armed with a good source for parts. Having access to available aftermarket lock parts, pinning kits and accessories not only makes the job much easier, it also makes it more profitable.

Many times only a small portion of a lock needs service or replacement. Because dealers do not have access to parts of locks or the expertise to repair them, the only alternative they have is to replace the whole lock and often a whole set of locks.

A locksmith can help the dealer save money while making himself money by knowing where and how to obtain the parts and being able to repair and/or replace them.

The first tool on the list for foreign auto service should be parts catalogs. Auto Security Products offers an extensive line of domestic and foreign auto parts and accessories as does All-Lock or Briggs and Stratton. Catalogs as well as annual updates of these manufacturers can be obtained from local distributors.

Pinning Kits

Before moving into the service section it should be mentioned that the locks pictured in this article are examples of the different types of locks found in the Honda. These are by no means the only locks that are used. A quick perusal of the parts catalog reveals this. Instead these locks are representative of a class or genre of lock. All other locks fall into one of these genres and by following the procedures set forth in this article, most, if not all, Honda locks can be serviced without fear.

Common among all the locks,

however, are the pinning kits. Hondas in these years used one of two code series: the 3001-4482 or 5001-8442.

To service locks with the 3001-4482 series use the following kits. ASP pinning kit A19-101 for all locks except ignitions. Use ASP pinning kit A19-103 for ignition locks in this code series. Many of the kits include facecaps and other accessories. Check the catalog for details.

To service locks with the 5001-8442 series use the following kits. Both ignition and door locks use the ASP A19-104 pinning kit.

All-Lock pinning kit A6600 and ASP A19-100 cover both series.

There are only three wafer tumblers for the 3001-4482 series, numbered one, two and three with one being the shallowest wafer and three the deepest. The wafers in the ignition are slightly bigger and do not interchange with the rest of the locks on the car.

The 5001-8442 series use wafer tumblers also, with depths from one to six, one being the shallowest. The same tumblers fit all locks.

Door Locks

There are four basic door lock styles in Hondas during these years. All except one are lock-in-handle types.

The first lock, a door out of handle style, (see photograph 1) has a pan shaped facecap and plastic pawl (see photograph 2). This lock appeared on many of the early to mid 1980 Accords. It has the X181 keyway and uses the ASP A19-101 pinning kit.

To service, first remove the E clip holding the pawl on; remove the pawl, noting which way and direction it sat on the lock, then remove the return spring.

Turn the lock over and use a decapping pliers to remove the facecap. Do not damage the plug dustcover.

To remove the plug, insert a key and pull. If a key is not available, rake the wafers while applying pressure from the rear of the plug.



1. Door out of handle style lock has...

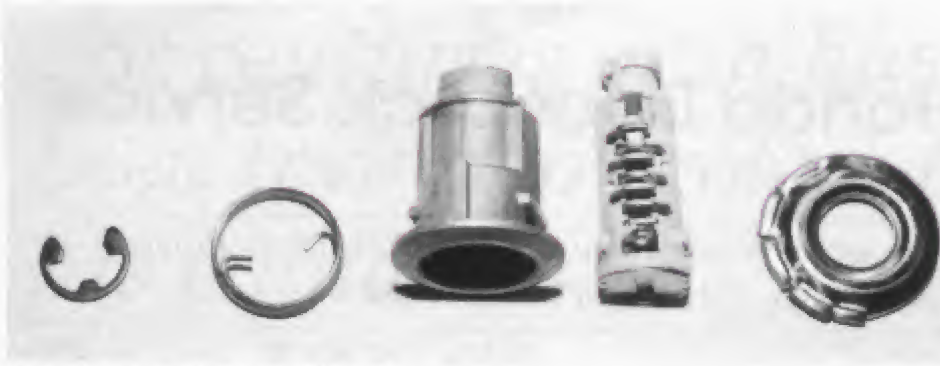


2. ...pan shaped facecap, plastic pawl.

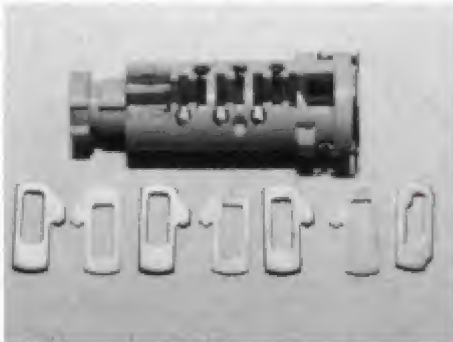
Most noticeable in many of these locks is the plastic plug. When servicing it is advisable that the plastic plug (ASP #D19-305) be replaced with a cast metal plug (ASP #D19-308). (See photograph 3.)

This particular lock has the last six of eight wafers, or cuts three through eight. The first wafer seen in photograph four is actually not a true tumbler, but a front stop tumbler. This particular wafer protects the grooving and makes sure that the key is properly seated when inserted into the lock. Removing or neglecting to replace this wafer during reassembly is a mistake.

Once service is complete insert the plug back into the cylinder. Use ASP replacement cap P19-202, turning the lock over to peen the facecap tabs down



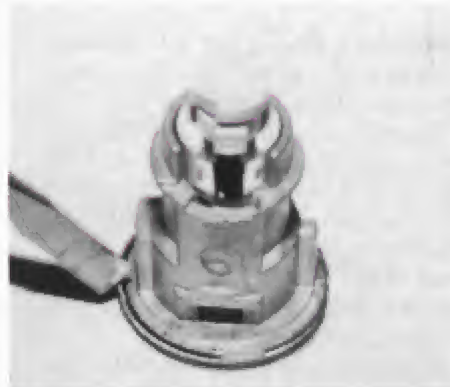
3. Replace plastic plug with metal.



4. All the wafers shown.

snugly to the lock body. (See photograph 5.)

Test the key. If the plug is hard to turn, the facecap may be too tight or binding it. Turn the lock upside down



5. Peening the facecap tabs.

and gently tap the back of the plug. Check operation again, making sure the facecap is not loose. (See photograph 6.)

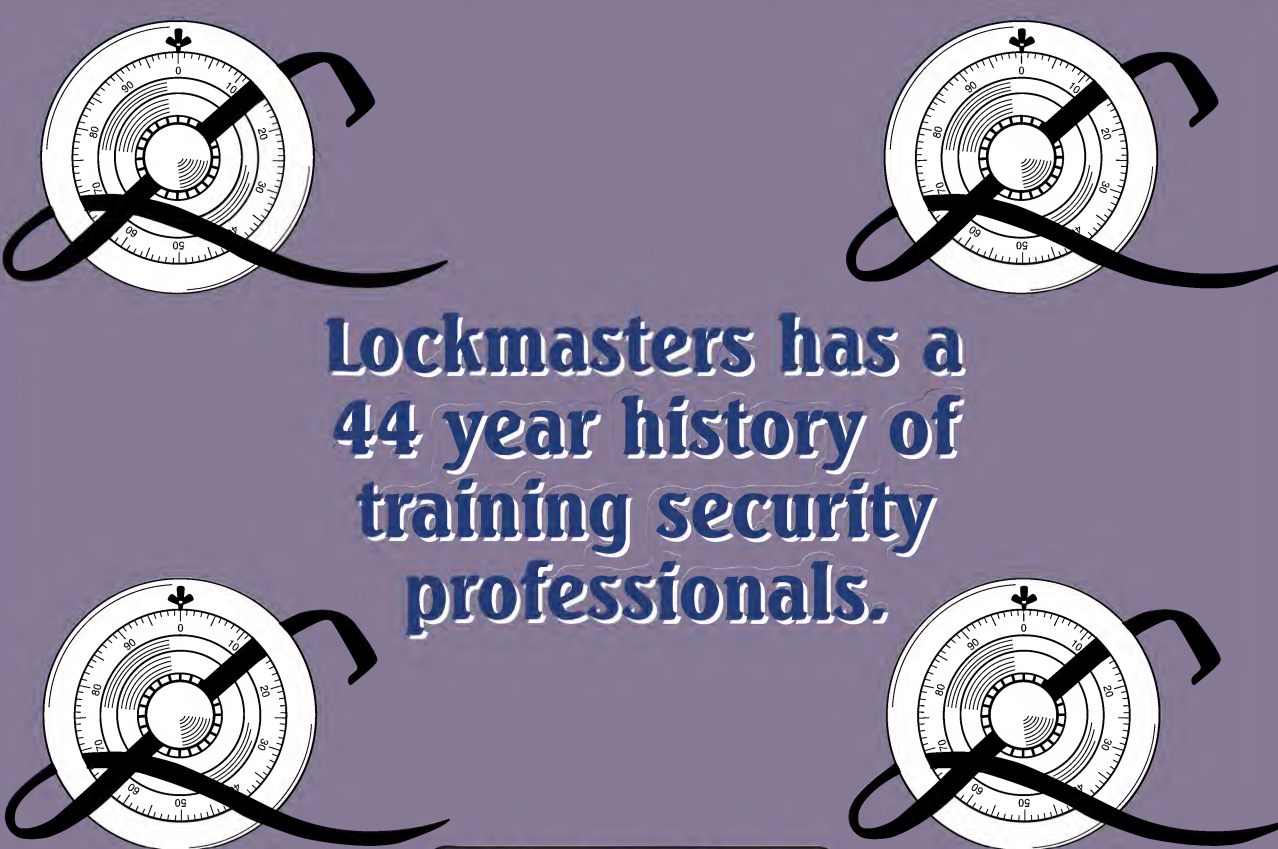
Replace the return spring, pawl and



6. Gently tap the back of the plug.

pawl clip. The lock is serviced. (See photograph 7.)

The next lock is a lock-in-handle variety used on the Accords from 1986 to 1989. (See photograph 8.) This lock is a sample of the Honda locks having a reusable facecap. With careful prying, the facecaps on these locks can be removed without damage and then replaced when service is done. This



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7. Completely serviced lock.

lock also uses the X181 keyway and uses the ASP A19-101 pinning kit.

To begin service, remove the E clip, pawl, pawl washer, return spring and return spring sleeve. Remember to note the direction and side the pawl sits. (See photograph 9.)

Then, using a small straight blade screwdriver, gently pry the facecap off. (See photograph 10.)

With the cap removed, gently pull the plug out from the cylinder. A key or picking is not needed to remove the plug. (See photograph 11.)



8. Lock-in-handle variety lock.



9. E clip, pawl, pawl washer, return spring and return spring sleeve removed.

This plug is made of cast metal and holds the center six of eight wafers, or cuts two through seven. If the plug



10. Gently prying the facecap off.

needs replacement use ASP plug D19-309. (See photograph 12.)

To reassemble, replace plug in cylinder and snap cap back into place. (See photograph 13.) Replace the return spring sleeve and spring, the pawl washer and pawl and E clip.

The next type of Honda door lock started with the 1983 Prelude and can be identified by the concave facecap. (See photograph 14.) This lock has the X181 keyway and uses ASP pinning kit

Continued on page 35

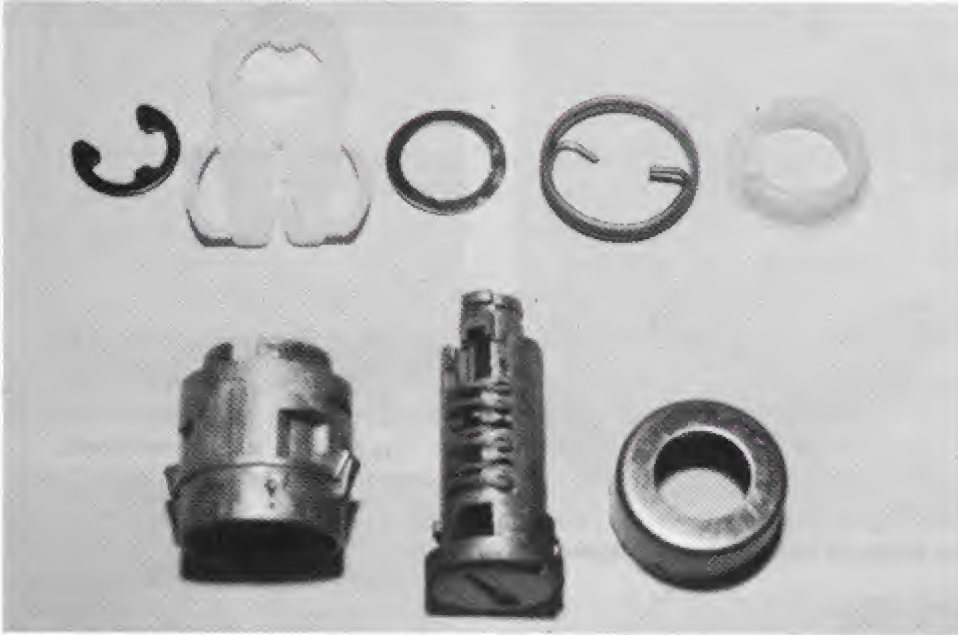
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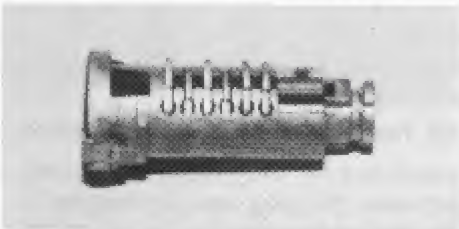
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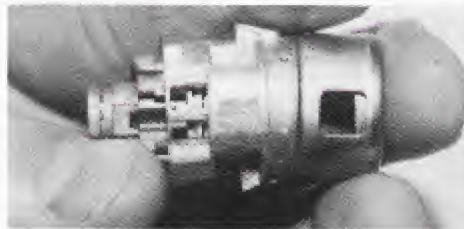
Continued from page 33



11. The plug removed from cylinder.



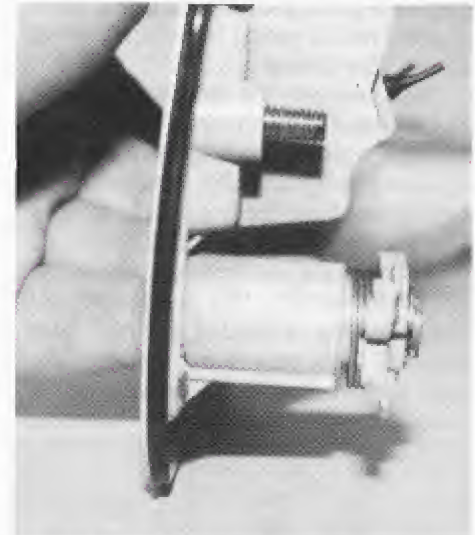
12. ASP, D19-309 replacement plug.



13. Cap snapped back in place.



14. 83 Honda Prelude door lock.



15. Side view of handle/lock housing.

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A19-101. Because the handle actually forms part of the lock, both the handle and plug are dealer items only. If only the plug needs replacement ASP's D19-309 can be used.

A side view of this handle shows that the handle actually serves as the lock cylinder or housing. In order to service this lock the whole handle must be removed from the vehicle. (See photograph 15.)

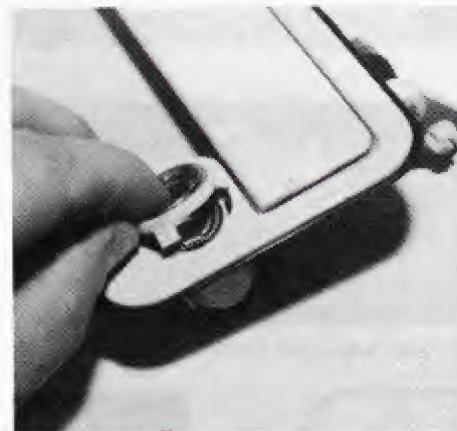
To service this lock, remove the E clip (see photograph 16), pawl, pawl washer, return spring and return spring sleeve. (See photograph 17.)

Next, remove the facecap. It is held to the handle by three tabs inserted through a plastic gasket. Bend the tabs up (see photograph 18), and push the facecap out from the front of the handle. (See photographs 19, 20 and 21.)

Pull the plug out from the face of the handle for service. (See photograph 22.) If a new plug is needed use ASP plug D19-309. This plug is not designed for this lock, but it does fit and work. Outside of some minor casting



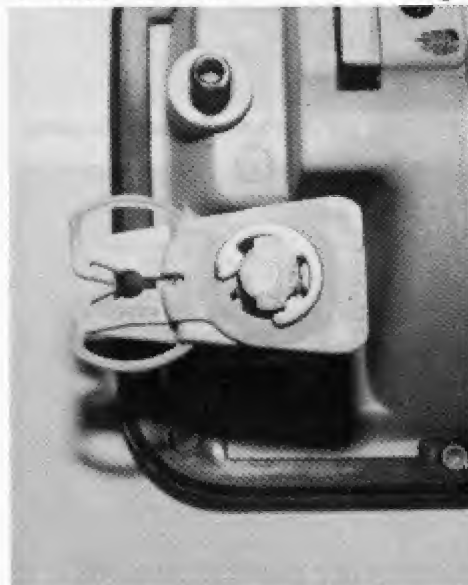
18. Bend up tabs to remove facecap.



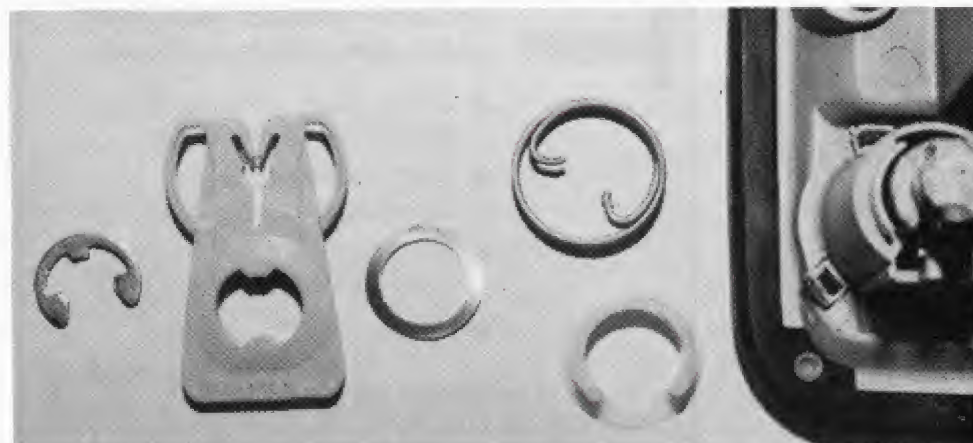
19. Push the facecap out handle front.



20. The facecap.



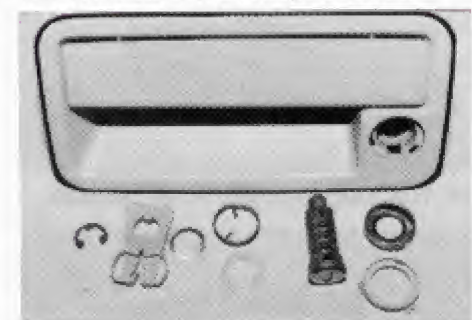
16. Remove the E clip.



17. The disassembled lock.



21. The handle, facecap removed.



22. The plug removed from the handle.

variations the only major difference between this plug and the original is that the original plug houses wafers one through six, while the D19-309 houses wafers two through seven.

To reassemble, place the plug back into the handle housing. Place the gasket into the face of the handle making sure the tabs pass through the tab holes in the handle. (See photograph 23.) Replace the facecap (ASP replacement P19-206), pressing the tabs tightly into place. (See photographs 24 and refer back to 14.)

The final lock style that Honda uses is typical of the lock-in-handle locks



23. Place the gasket into handle face.



24. Press the tabs tightly in place.

used on the later model vehicles using the X182 keyway and using pinning kit A19-104.

These locks are held into the handle by a clip and do not have facecaps to remove. (See photograph 25.) The facecap is part of the handle. Until recently, if these facecaps were removed from the handle a whole new handle had to be purchased and painted. ASP is now offering



25. Locks held in by a clip.

replacement facecaps for these handles.

To service this lock, remove the E clip (see photograph 26), pawl, return

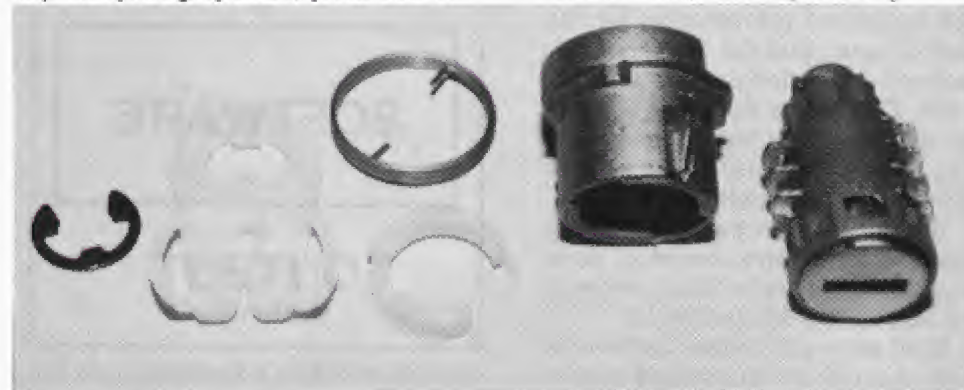


26. Lock ready for servicing.

spring and return spring sleeve from the back of the lock. Slip the plug out of the front of the cylinder for service. (See photograph 27.)

To reassemble, reverse the above procedure.

Next month, Honda ignitions. §



27. Completely disassembled lock.

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Test Article #12
Electronic
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To be tested in June 1993 issue.
Details in insert in front of issue.

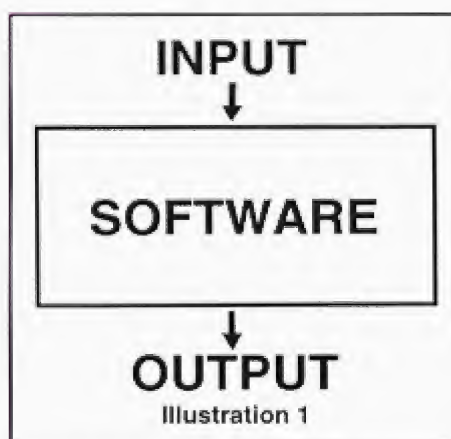
Control Panels

"This article is part of our Security Certificate Program. In a future issue, the content will be tested."

The control panel is the brain of the access control system. It is here, after the reader has accepted and formatted information for the control panel, that the information is analyzed and a decision for action is made. This article describes some of the decisions that the control panel may have at its disposal and how various systems are set up.

While the term control panel is vague, it will always consist of three parts or components: input, software and output. (See illustration 1.)

Input generally comes from one of three sources: alarm contacts and/or door or lock status switches, the reader and a programmer, and are

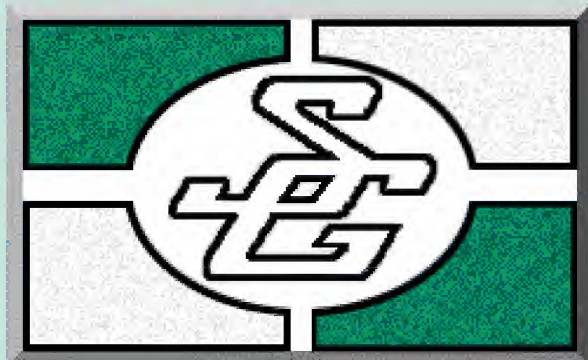


usually wired to a terminal strip on the control panel circuit board.

The software is basically the mind

of the control panel. It is this part of the system that interprets the input information and formulates the response. It defines the capabilities and limits of the system per the manufacturer's specifications. The software determines such things as the number of users, entry/exit delays, timing windows, audit trail capability and other parts integral to a given system.

The output is simply the carrying out of the decision that the software has made. Usually the output involves the activation of a relay. A relay is simply a switch that opens or closes when it is activated. The number and kind of outputs in a control panel is



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entirely at the manufacturer's discretion but all fall into one of three categories, depending on the response the software is programmed to make: alarm, lock/strike activation, and record of system activity.

Not all systems will include all of the inputs or outputs. In fact, the only inputs needed for an access control system is the reader and programming, and the only required output is the lock/strike activation. The other inputs and outputs are options that enhance the security and/or operation of the system.

Placement Of The Control Panel

As mentioned in a previous access control article, there are three kinds of access control systems based on placement of the control panel and the reader: The simplest, the control panel as part of the reader; next, the reader and control panel as separate components; and, finally, the PC based system. (See illustration 2.)

Generally, the systems where the control panel is part of the reader are simple and inexpensive systems that have limited capabilities (OSI's Omnilock and Alarm Lock's Trilogy are just two exceptions that will be

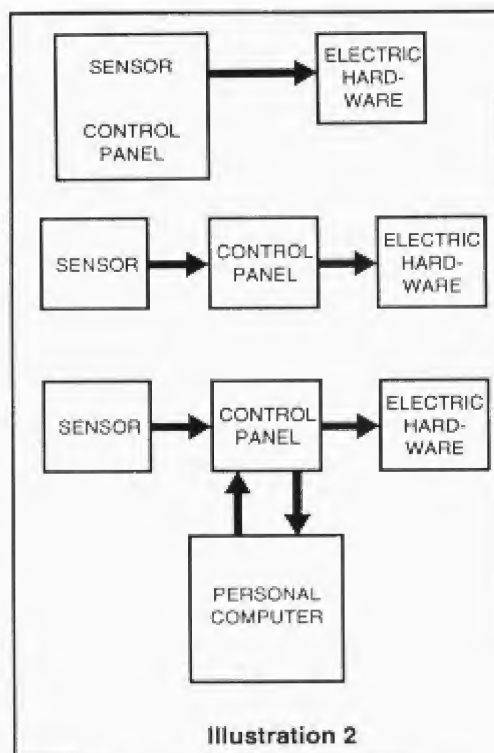


Illustration 2

discussed in later articles). The basic advantage to these types of systems is that they are relatively low cost and low maintenance.

There are two disadvantages inherent with these types of systems, however. First, because both reader

and control panel are contained to such a small area, these systems are usually stand alone units with limited capabilities and options. Second, removing them from the wall or door allows access to the strike/lock relay or wiring, allowing the system to be easily compromised or violated.

The next group of systems solved these problems by separating the reader from the control panel. Moving the control panel to a secure place within the building makes the system much harder to violate. Also, larger and more sophisticated circuitry and software can be used, creating systems with advanced features and options. Of course, the main disadvantage with these systems is higher cost and harder installations. The PC based system, while costing more than other types of systems, makes room for the most advanced features and options, as well as creating systems that are more user friendly.

Inputs

Stated earlier, there are three possible inputs: alarm contacts and/or status switches, reader, and programming.

Alarm inputs are generally used to

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warn or notify when a door has been opened without the use of the system, indicating a violation has been made or attempted, and may work in conjunction with the status switches. The typical alarm input consists of a normally open or normally closed switch attached to the door and wired back to the control panel. Alarming is typically reserved in areas or doors requiring a higher degree of security.

The door/lock status switch serves three purposes. First, it let's the system know whether the door is in fact shut and/or locked. If a door is held open or does not lock properly, the system can sound an alarm or otherwise warn that there is a system problem or failure.

Second, it can be used to assure that locks requiring synchronized locking are activated at the appropriate time. Electric deadbolts and shear magnetic locks are a couple of examples where timing is critical for proper functioning.

Third, and finally, they are used to eliminate a "follower" situation.

The reader, of course, supplies input that is formatted for the software application. For a better description on readers refer to *The National Locksmith*, March 1993. In order to operate, the system has to be programmed. Programming sets the parameters for users, timing and other options that a system offers. Again, while there are many variations, programming is conducted either through a keypad, a programming card or by computer.

Keypad programming generally starts by first accessing the programming mode using a master or programming code or password. Once in the programming mode, the programmer enters sequences of numbers and symbols displayed on the keypad, to make the necessary changes.

Some systems use a programming card to add or delete users from a system and make other changes as required. In Detex's Dentco II, for example, for every user card issued there is a master card. If a user is to be added to the system, they receive the user card. The master card is inserted into the reader to activate that user card. To deactivate or remove that user from the system, the master card for that user is reinserted into the reader.

Programming by computer

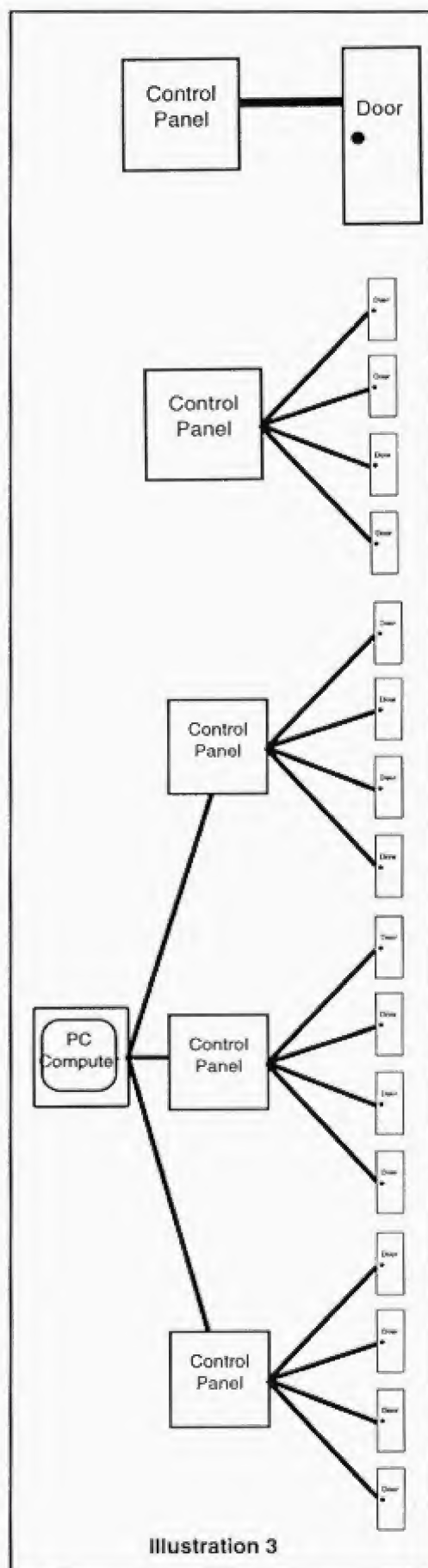


Illustration 3

normally involves a computer that is dedicated solely for the purpose of the

Continued on page 69

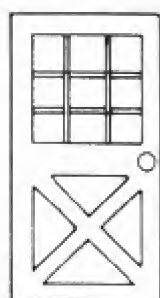
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DOOR

HARDWARE

In this section you will find a variety of items that all have at least one thing in common...door security. Each of these products in some way concerns itself with keeping "them" out. Whether it is a new kind of screw, a new lock, or other protective device, door security hardware is really at the core of locksmithing. If you require more information about any of these products, circle the appropriate number on the Rapid Reply Card.

There is more to door security than locks, although they certainly are the primary security feature. Still, a lock is only as good as the door it secures, and the frame/jamb into which it fits. While you are installing

fine locks, make sure that the door and frame are adequate for the job. If not, sell and install some door and frame reinforcement hardware. For an example of such an item, see some of the products featured in this section.

Allow us to take this opportunity to once again ask you to take the extra trouble to *sell* a little bit more on your next service call. Once you have made the trip, it pays to take home a little extra profit. Reinforcement hardware and upgrading of current security are two methods to increase your dollar volume per call. This is good for you, your distributor, the manufacturer, and ultimately, your customer. **MG**

Alarm Lock's Panic Alarm

The model 250, 260, 700 and 710 from Alarm Lock are U.L. listed panic alarm deadbolt devices which restrict unauthorized use of exit doors by sounding an alarm, yet provide immediate opening in emergencies. Doors can be protected by the high security deadlatch alone or choose the deadbolt for extra security.

All four models feature the powerful dual piezo alarm, 9-volt battery, low battery alert, inside/outside cylinder capability, non handed ease of installation and choice of metallic silver or duronodic finishes.

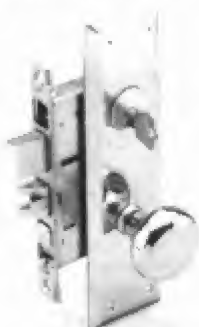


Circle 227 on Rapid Reply

Almet's New Mortise Lock

Almet Inc. (A Masco Co.) announces the availability of their new 4000 series mortise lock. Specially designed to meet NYC housing requirements, it is a commercial quality mortise lock with 2-1/2" backset, UL listed, meeting high density housing codes.

Almet also manufactures a complete line of Grade 7 and 2 UL listed 2-3/4" backset mortise locks and trim specializing in lever handle-sets that meet all applicable requirements of the Americans with Disabilities Act.



Circle 228 on Rapid Reply

Baldwin Offers Fine Designs

Baldwin architectural hardware offers the fine designs and outstanding quality. Their products are manufactured from solid brass, through a hot forging process that yields a denser, stronger, heavier product. The smooth, blemish-free surface of each item is meticulously polished to bring out the deep, warm luster of the brass and to create a brilliant finish. Each piece of brass is protected with a unique, clear coating that provides lasting beauty with minimum care.

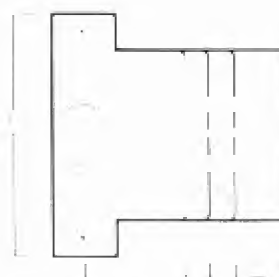


Circle 229 on Rapid Reply

Don-Jo's Extended Lip Strikes

Don-Jo Mfg. has announced the introduction of a new series of extended lip ASA Strikes. All sizes are made from high quality 13 gauge material. The height is 4-7/8" and the widths are 2", 2-1/2", 3" and 4". The width is measured from the center of the screw holes to the end of the lip.

All sizes are available in three architectural finishes: brass, bronze and stainless steel.



Circle 230 on Rapid Reply

Continued from page 42

Dorma's High Security Closers

Dorma's HS Series (HS 7800 and HS 83) minimizes the opportunity for tampering, vandalism or damage and abuse of the door closers. These high-security door closers are recommended for the use in correctional facilities, financial institutions, or any location where protection of door hardware is imperative.

Both the HS 7800 and HS 83 surface-applied closers use tamper resistant TORX® security screws for all exposed fasteners and utilize fixed link arm assemblies.



Circle 231 on Rapid Reply

Dor-O Matic's New Vertical Rod

Problems in applying exit devices to narrow stile door have been solved with Dor-O-Matic's new Series 1490 Concealed Vertical Rod and 1590 Rim Touchbar Exit Devices. These units were designed to be used on doors with stiles as narrow as two inches. Available in anodized clear, bronze, and black colors, these devices are made with all steel operating mechanism and aluminum end caps for years of trouble free operation. The Series 1490 and 1590 are excellent choices for retrofit and are available with full lever trim.



Circle 232 on Rapid Reply

Dortronics Door Release Sounder

Dortronics Systems introduces their new Door Release Sounder which emits an audible beeping for five to seven seconds to indicate an electro-magnet has been de-energized and the door is free to open.

Door locked and secure status is indicated with a green LED incorporated into an end plate of the Maglock, or may be independently wall mounted on a switch plate. This unit is ideal for use in apartment entrances, banks and offices.



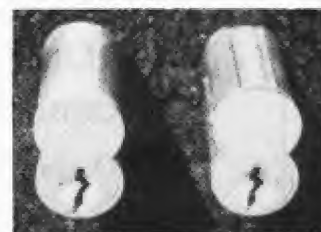
Circle 233 on Rapid Reply

NT Falcon Lock's Interchangeables

NT Falcon Lock, a New-man Tonks company, has developed interchangeable cores which can be capped individually using Best or Arrow brand capping equipment, or covered all at once using NT Falcon's slide cover.

NT Falcon's interchangeable cores allow locksmiths to re-pin a Falcon lock without buying new equipment. However, locksmiths still have the option of using the Falcon slide cover, which covers all the holes simultaneously.

For locksmiths who prefer to use a slide cover but do not have the proper tools, NT Falcon offers a pinning block and a tapping plate.



Circle 234 on Rapid Reply



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LeverTrak™ Kits By Folger Adam

Folger Adam Company, has announced the first stage in its development program for LeverTrak™ Lever Handle Guide Sets for new or existing applications. The sets are designed to overcome the problems with abuse of lever handles on high frequency doors.

Lever handles, by nature, allow excessive pressures to be transmitted to the lock mechanism, shortening service life. The Folger Adam Lever Handle Guide Track, however, controls over-travel through the use of an adjustable stop, thereby extending the service life of the lock.



Circle 235 on Rapid Reply

HEWI Lever Handles

The leverhandles from HEWI are for single point locks or latches classified by the Underwriters Laboratories Inc.® intended for installation on mortise type locksets. All lever handles comply with ANSI A 117.1. Lever handles are available in two basic shapes, either U-shaped or half-circular. They are manufactured for solid nylon material, colored throughout and reinforced with steel cores.



Circle 236 on Rapid Reply

JLM Now Stocks Handicap Operators

JLM wholesale now stocks handicap operators by Dor-O-Matic, LCN Closers, and Stanley. These units are specially designed to meet requirements of the new ADA Law. These units work on a low energy basis and do not require safety devices such as mats and infra-red detectors.

JLM Wholesale is a national wholesaler of high quality door hardware products used in the locksmith, architectural hardware, aluminum storefront and security industries.

Leslie-Locke Has Traditional Style

Leslie-Locke, Inc. provides a clean, elegant look and maximum protection with their Traditional Style Village Ironsmith® security doors. A major feature of the Traditional Style door is versatility, as it is designed to look good on almost any type of home. Traditional Style security doors also include rugged 1" x 2" frames and 1-1/4" x 1-1/4" jambs, pre-hung to the hinge-side jamb, and are available in black, white and (on the West Coast) Navajo White.



Circle 238 on Rapid Reply



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Master Adds Handlesets To Line

Three handlesets, the Richmond, Dallas and Plymouth, are being added to the Master Lock high-security line of door hardware.

The Richmond features an elegant oval face and curved handle; the Dallas is sleek, with a rectangular face and handle, and the Plymouth has a handsome, octagonal face with sweeping handle. These handlesets complement any style home and fit most doors. They feature: Grade 2 deadbolt security rating for maximum protection, and exclusive "hands-free" mounting.



Circle 239 on Rapid Reply

NT Monarch's Vertical Rod Device

NT Monarch Hardware, a Newman Tonks Company, has introduced the first, fully-adjustable-on-the-door, concealed vertical rod exit device. It is precision-crafted for Grade 1 heavy-duty construction applications.

With a simplified trim and minimal cut-out required, installation is easy. In addition, the innovative design allows adjustment of the latching bolts without having to remove or rehang the door. The latchbolts have a 3/4" throw at the top and a 1/2" throw at the bottom.



Circle 240 on Rapid Reply

Omnia Debuts Solid Brass Line

Omnia Industries has announced the availability of a full color, twelve page brochure detailing their newly introduced line of solid brass, mortise handlesets.

The brochure presents six separate lines of handle sets: Estate, Waldorf, Regal, Manor, Palazzo, and Chateau. Each line caters to a different design aesthetic. In addition to the main exterior handlesets and featured interior trim options, Omnia has developed extensive alternatives.



Circle 241 on Rapid Reply

S. Parker's ADA Line

S. Parker stocks a comprehensive UL/ADA product line. Their most popular ADA item is their grade 2 heavy duty cylindrical key-in-lever sets. They conform with ANSI, A156.2 Series 4000.

Available in entry, passage, privacy, storeroom, classroom, dummy and less cylinder functions, these sets accept Lori, Ilco, Medeco, Corbin, Russwin, Kwikset, Sargent and other leading keyways (up to 22). Each lever set in any function has a full five inch handle grip for easy opening.



Circle 242 on Rapid Reply

Positive Lock's Double Action Lock

Positive Lock manufactures a lock which locks both sides of a door simultaneously. There are several models available, from a simple thumb turn handle to an emergency exit paddle. All lock models use 1/2" locking rods that extend into the door jambs 1-1/2" on both sides.

The TH-Series is an inexpensive model that is very popular for use on small shops or buildings. The THPA(W) -Series is a moderate priced emergency exit lock with a self contained alarm system which emits 108 db's using a standard 9 volt battery.



Circle 243 on Rapid Reply

NT Quality's 163T Door Pull's

NT Quality Hardware, a Newman Tonks company, offers the new 163T deluxe custom tubular door pull and push/pull sets which can provide a distinctive look to a variety of commercial applications.

The 1-1/4" diameter tubular brass pulls are available in all architectural finishes.



Circle 244 on Rapid Reply

The Gibcloser From Reilor

The Gibcloser, manufactured by Reilor Inc., is a unique door closer. It is small and unobtrusive, yet strong enough to close a door weighing up to 150 pounds. It is UL listed with a one hour fire rating, and has been tested up to 100,000 closings without failure. Fully adjustable, it is ideal for any interior or exterior doors which need closing to help prevent heat and air conditioning loss, spread of fires, and children's accidents.

The Gibcloser can be installed in five minutes, and it fits any left or right hand door jamb on wood and metal doors.



Circle 245 on Rapid Reply

Schlage Lock Co. Features Primus

The S-Series keyed lever is available with the Primus® high security cylinder from Schlage Lock Co. The Primus system is a security cylinder machined to accept a "sidebar" and a set of "fingerpins" which, in combination with Schlage's conventional 6 pin keying, provides two independent locking mechanisms operated by a specially designed Primus key. The Primus key will also operate standard Schlage cylinders in most keyways, thereby making Primus and the S-Series compatible with existing masterkey systems.



Circle 246 on Rapid Reply

Continued from page 46

Scotsman's DorGard Products

DorGard Products from Scotsman Security Products offer excellent aluminum narrow stile door security. The DorGard I is a solid steel plate designed to fortify a rim or flush mounted mortise cylinder. The DorGard II completely encases the mortise cylinder of a narrow stile aluminum door. DorGard III, an extension of DorGard II, protects the latch area of the door as well as the cylinder.

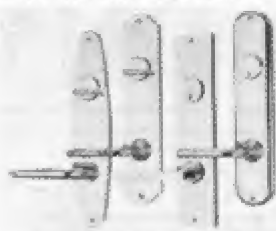


Circle 247 on Rapid Reply

WeslockNational's Handset Line

WeslockNational's Premiere Edition entrance handle sets are 100% solid forged brass. The new designs capture the look and feel of higher priced mortised handle sets for about half the cost. Unique mortise-lock latch plates furnish the solid, secure look of products costing more than twice as much. Newly designed inside levers are coordinated to match the outside handles.

Premiere Edition handle sets are available in double or single cylinder models, the single cylinder locks feature "panic-proof" easy exit levers. The backsets are adjustable.



Circle 248 on Rapid Reply

Zero Offers Unigear Hinges

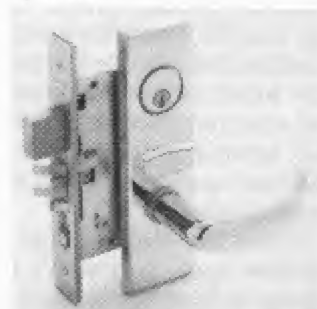
Zero's acclaimed Unigear Continuous Hinge System is now available with a three hour fire rating. The Unigear system integrates two extruded aluminum segments in a cover channel, with support bearings of long wearing, self-lubricating Delrin™. The hinge rotates a full 180 degrees, provides maximum shock absorption, and distributes weight evenly. The fire-rated Unigear system (#911) is approved for use with any sized three hour fire-rated steel door up to nine feet.



#911
Circle 249 on Rapid Reply

NT Falcon Lock's Redesigned Locks

NT Falcon Lock, a Newman Tonks Company, has completely redesigned its Grade 1 mortise lock. The new design offers increased durability, and easy installation. Significant features of the NT Falcon Mortise Lock include: solid lever and solid brass trim collar, a spring-in-rose lever that won't "droop", a simple design for easy "rehanding" in field, and large screws treated with sealant so they won't back out. It also has a one-piece steel hub, and two separate "breakaway" floating spindles.



Circle 250 on Rapid Reply



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Car Opening...

Under-The-Window Tool Use

"If your under-the-window tool won't reach the interior locking button, don't panic! Follow these directions."

Have you ever gone out on a GM lockout with your under-the-window tool in hand, inserted the tool into the door, lifted the tool up into the car, and realized the tip of the tool won't reach the locking button? It can drive you nuts. We would like to show you two solutions that relate to this problem. The first solution relates to removing your tool after you discover the problem and the second solution relates to an alternate opening approach for a typical problem vehicle.

When you discover your under-the-window type tool won't reach the interior locking button, don't panic! Get another under-the-window tool from your opening set and follow these directions:

Insert the second under-the-window tool into the door between the window and the weather-stripping.

Lower the tool until the top rounded edge of the tool is beneath the window glass.

Remove your wedge to release the pressure on the glass.

Rotate the tool 15 to 20 degrees and lift, working the rounded edge of the tool up between the inside of the door glass and the inside weather-stripping.

If the window is tight, a gentle rocking motion will help the tool work it's way into the car.

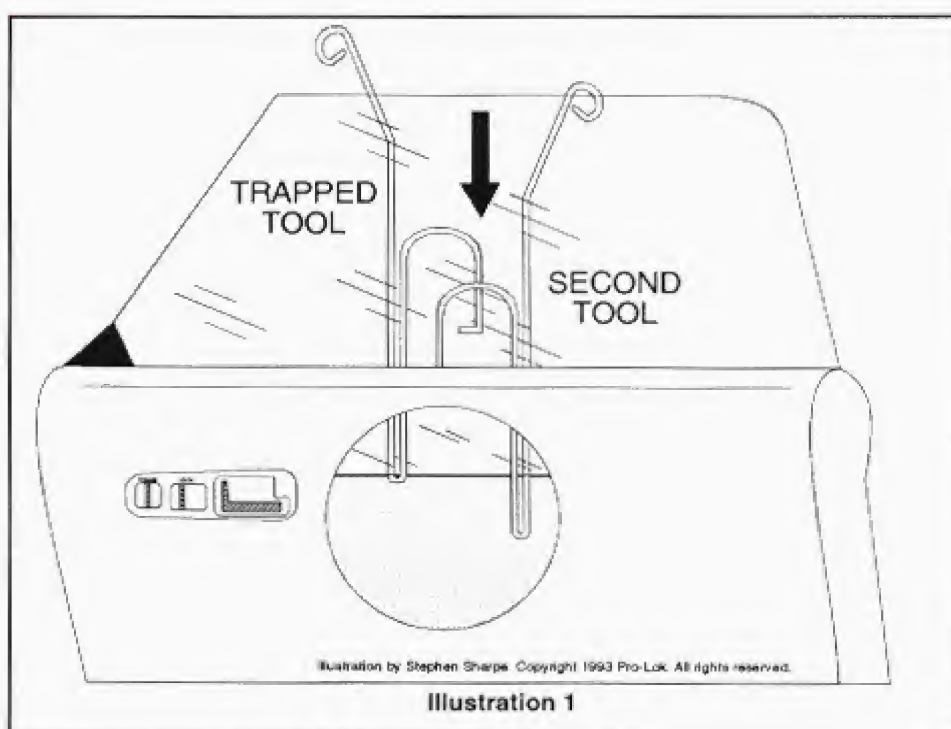
IMPORTANT: *Don't pull the tip of the tool up into the car.*

Using the top of the second tool (that is exposed inside the car) as a ramp, guide the tip of the trapped tool back into the door.

Once the tip of the trapped tool is inside the door, lower both tools together below the glass and lift them up out of the door together.

Using this technique you can remove a trapped under-the-window tool from a locked car. (See illustration 1.)

The Grand Am is one of several GM vehicles that has had the interior locking button lowered on the passenger door panel. Because of this change your



2. Insert a wedge in rear window.

under-the-window tool may not reach the interior locking button. Try this technique on the rear door of the four door model as an alternative method:

Insert a wedge into the center of the rear door between the window and the weather-stripping. (See photograph 2.)

Lower the tool until the tip of the tool is beneath the window glass.

Rotate the tool 90 degrees and lower the tool onto the lower lock rod in the door.



3. Tool properly positioned on lock rod.

Slowly rotate the tool until the tip of the tool "falls" onto the lock rod. (See photograph 3.)

Twist the tool to create a bind on the lock rod. And while you are maintaining the pressure on the rod, use your other hand to pull the tool forward to unlock the car.

There is usually more than one way to open most cars. The new Grand Am is no exception!§

This article was supplied by High Tech Tools.



by Jake Jakubowski

Doin' It Their Way!

"They called me again to say the bad guys had struck again and maybe I should do what I recommended the first time."

The Parks and Recreation Department of a nearby county called me about six months ago to come to one of their facilities and repair a lock that had been damaged during a break-in. The thieves had simply pounded the Kwikset entry set off the door, pushed the door open, and cleaned out the goodies in the snack bar.

At the specific request of the Parks and Recreation Director, I straightened out the door, installed a new lockset, left a bill, and drove home.

About 10 days later, the P&R Director called to inform me that the bad guys had struck again, and maybe

he should have me install the deadbolt that I had recommended on my previous visit.

When I got to the facility, the P&R Director was there, and we both examined the damage done by the burglars. This time, the damage was slightly more extensive. As the bad guys (gals?) beat on, and around, the lockset; they managed to whomp the door a couple of times with sufficient force to break the seam loose from the stile. Photograph one shows the bolts I used to "repair" the damage.

At this point, I recommended that we install a MAG plate, and Lori deadbolt, and heavy duty Don-Jo Strike.



1. The burglary-damaged deadbolt.



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When I quoted a price for the repairs, the director told me that he felt that "good fiscal responsibility," dictated that I repair the door as "economically as possible," and just install a deadbolt in the hole where the entry-set had been. Consequently, the two carriage bolts "pulling" the door skins together, and the double cylinder deadbolt. (Again, refer to photograph 1.)

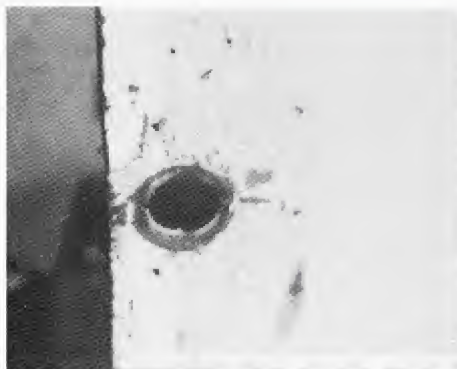
Thus far, this "fiscally responsible" public servant had lost several hundred dollars worth of snacks and drinks to the burglars, was out almost that much in hardware, installation fees, and service calls; and still wanted to secure the door "as economically as possible." However, I gave him what he asked for, thanked him, told him I would see him the next time, and went home.

The following Monday, the director called me and wanted to know if I "would, ahem, uh, consider 'redoing' the door with the hardware that I had recommended last week?" You guessed it! The burglars with the sweet tooth (teeth?), had struck again? I was beginning to consider the idea of giving the recreation department quantity discounts!

At any rate, photograph one shows that this time, the bad guys had beaten the door and lock hard enough to dislocate the bolt from the lock proper. Photograph two shows the damage in, and around, the cross bore. If you look closely at the latch edge of the door you can see where the door bows inward. Photograph three shows that the force of the beating knocked the strike plate out of the jamb, and "ripped" the face of the jamb.

Photograph four shows a 12" x 1-3/4" Don-Jo Heavy Duty Strike (#FL212W-SL) surface mounted to the door jamb with six, 3" long screws, secured by six, 3" anchors that go through the metal jamb, and into the concrete itself. I surfaced mounted this strike so that when the wrap-around plate was installed on the door, there would be very little clearance and even less "play" between the door and jamb.

At this point, I mounted a MAG #520S 5" x 12" blank channel plate on the door. The reason that I used the blank channel was to drill my own holes, and use the channel to cover the latch face of the lock, rather than mount the latch in the MAG plate. I believe that this configuration gives the entire lock more strength. Photograph five shows the MAG 520S covering the latch face, with the Lori single cylinder



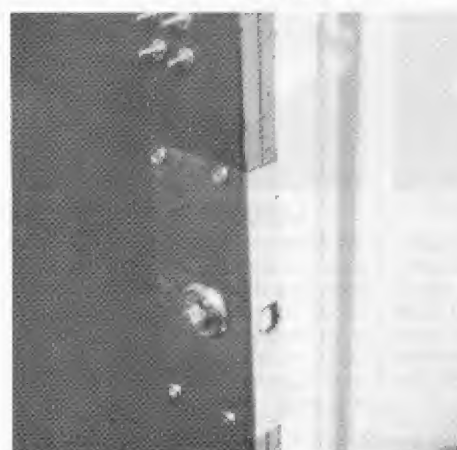
2. Damage to door around the lock area. Note "bow" on latch side.



3. The strike was knocked out of the jamb by the force of the attack.



4. Don-Jo strike "surface mounted."



5. MAG plate installed over the face of Lori deadbolt latch.



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mounted on door.

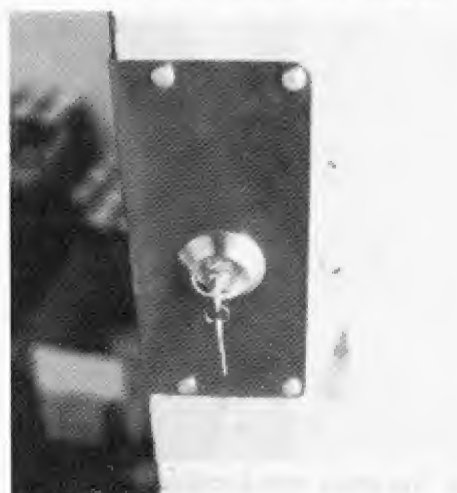
Photograph six shows the MAG 520S, and the Lori single cylinder (4514-25-12). Note the "center line" drawn across the jamb, and door, which I used to align the lock, strike, and MAG plate. Also, you can see in this photograph how, by surface mounting the strike, I eliminated the gap in the door that added to the vulnerability of this door to prying, hammering, and kicking.

Photograph seven shows the completed installation from the outside including the tapered collar on the Lori deadbolt. The tapered collar protects against "wrenching attacks," and also makes the lock more difficult to "beat" off the door. By mounting the MAG plate over the latch face (see photograph 5) it helps prevent the bolt from "wobbling," and eventually breaking, if someone hammers on the face of the door. The Master lock that you can see hanging at the top of photograph seven was removed and a "pull" handle put in it's place.

Since the installation of the MAG/Don-Jo/Lori combination there have been no further attempts to break down the door of the snack bar. I don't



6. Lori single cylinder mounted on door. Note center line for alignment.



7. Completed installation (exterior).

know whether its because the miscreants got their fill of sweets, or whether the hardware was impressive enough to discourage them from trying. Whatever the reason, the county's goodies have been left alone, and the Parks and Recreation Director has followed my subsequent recommendations for other work I've done for his department.

I guess the primary lesson to be learned here is that when you follow a customer's dictates, against your own judgment, simply be patient, and explain to the customer why you believe their "solution" may not be the most cost effective remedy. Don't "push" your point (Unless the customer's requirements could possibly prove life threatening to someone in the building.) And, should the client call you back to "upgrade" his recommendation, don't go back with an "I told you so" attitude.

Simply enjoy the opportunity to gather some additional shekels from "fiscally responsible" public employees who may not know that by "doin' it their way" may not be the best way at all. Of course, you probably already knew that. §

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A High Flying Job...

by Don Probasco

'Romancing' A Memphis Belle

"I make it a rule never to remove an airplane lock. However in this case I made an exception."

Strange things happen to all of us in the locksmith business. Boring, it is not. Such was the case in August, 1991, as I pulled into the parking lot of my store after completing a routine service call. Two men in a truck followed me into the lot and waited for me as I approached the store entrance. I recognized the driver as a customer we'll call Art.

"Do you have time to work on a lock on an airplane?" he called to me.

Not knowing if he was kidding or not, I responded, "Not until after lunch," looking at him quizzically and with some degree of disbelief.

"Can you fix a lock on a B-17?"

With a really perplexed look and total disbelief, I asked, "What are you trying to pull, Art?"

"I'm as serious as a heart attack," he replied. The look on his face bore out his words. "We flew a B-17 and a B-24 in here for the Garner Field reunion, and these folks need some lock work done on the '17. Stan, here, is with the Collins Foundation—the outfit that restored the two planes. I work for them sometimes and we flew them in for the show."

Suddenly, it all began to make sense. In August, 1941, Garner Field, a small air field in Uvalde, Texas, was set up as a training base for pilots. It was named for Uvalde native, John Nance Garner who was a former Speaker of the U. S. House of Representatives and Vice-President to President Franklin D. Roosevelt during Roosevelt's first two terms.

The field was closed shortly after the end of World War II. Part of the land was deeded to the city of Uvalde, and part was deeded to the newly founded Southwest Texas Junior College. In celebration of the fiftieth anniversary of its founding, Art had been instrumental in having these two World War II planes flown in for the celebration.

After lunch, I went to the airport and there they were, completely restored

and flyable. Art was there and showed me to the B-17 (see photograph 1). They wanted a key to the "back door" so they could lock it up at night, when it was unoccupied. There was one door, under the nose of the plane, for which they had a key. I tried it in the back door and found that, with a little wiggling, the lock would turn to the open position.

Due to some very bad past experiences, I make it a rule NEVER to remove an airplane lock. However, in

engage the groove sufficiently to keep it from turning. The locking bar, the housing, and the lock handle were all of machined aluminum. The only way to repair the lock would involve fabricating a new locking dog with a lathe. I explained the problem to Art and told him I did not have a lathe to do this.

The planes were to be there for about five days before being flown on to another area of the state for display. Art said that they still had a source for used



1. Don about to start work on the B-17.

this case I made an exception because there was no trim or door paneling to remove to get to the lock (see photograph 2). I removed the lock (see photograph 3) and disassembled it, finding that it was made very much like any other wafer lock (see photograph 4). It had an offset cam on the end of the cylinder which moved a locking bar or "dog" in and out along a groove in the housing.

After so many years of use, the locking bar was too worn on the end to

parts from scrapped World War II planes and perhaps they could obtain a replacement lock from that source. I replaced the locking dog and the cylinder in the lock housing and replaced the lock on the door.

When asked about my fee, I said there would be none, since I had not been able to secure the door, as they wanted. But I did ask permission to tour both planes and photograph them. The lady in charge of the tickets was most happy to accommodate me. She even



2. The interior of the door with handle removed.



3. The outside of the door with the handle removed.



4. The handle.

threw in an "All American" cap with a picture of the B-24 Liberator on it. I took quite a lot of pictures and left.

As I was driving back to the store, I remembered something. As a boy, I had collected pictures of the fighter and bomber planes of World War II. I even had jug-saw puzzles of the P-40, B-17, B-24, B-25, and others. I realized that I had just observed a part of the past that I would probably never see again.

The following Friday, I was called out to the airport on the final day of the celebration for a car lockout. One of the men who was in the first group of pilots to be trained there had attended the closing ceremonies and locked his keys in the car.

Just as I finished with the job, I heard the engines of the B-24 (*see photograph 5*) sputter into life. Slowly and laboriously, it rocked its way onto and down the runway. For what seemed an eternity, it clung to the concrete ribbon as if reluctant to leave. Then it



5. The B-24 Liberator.

gently rose into the blue sky with grace and majesty.

I stood there, silently watching, until it was almost out of sight. "Gone," I thought. But, no! It made a wide swing and started back. As it passed directly overhead, it gave a tilt of the wings in a

salute to us on the ground. There were lumps in many throats and tears in our eyes as "The Lady said farewell."

If you ever get a chance to see either of these airplanes, I would highly recommend it. They are beautifully restored, and I think you will find your time well spent to see them.

As I again returned to the store, I thought how moving and exciting the day had been.. In my estimation, it ranked right up there with the time I was asked to judge the women's 100-yard dash at the nudist colony—but that is another story—one which probably will not be told. §

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by Dale Libby

Mosler's MR/Cam Repair

"When you rotate the dial towards the drop-in you will feel and hear a 'click-click' sound. Hence, I call this the 'Clickety-Click' lock."

I have worked for many years on Mosler locks. One of the combination locks that has caused me a considerable amount of trouble is the Mosler MR302/402 unit. The locks are the standard 302/402 variety with the addition of a split spring-loaded drive cam. The number 3 in the 302 means three wheels. The number 4 in the 402 lock refers to the unit having 4 wheels. The MR stands for "Manipulation Resistant."

These MR locks are easy to recognize after turning the dial. When you rotate the dial towards the drop-in position of the combination lock, which should be between 10 and 90 on the dial, you will feel and possibly hear a "click-click" sound and feel the dial stop and jump as you are turning. Hence, I have called this lock the Mosler Clickety-Click lock for years. I am sure the purists out there have chided me for this, but I find it more descriptive than spouting numbers like MR/302-402 Group II combination lock.

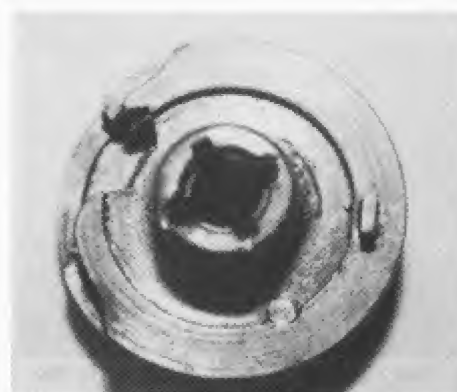
The way to tell if the lock is a 302 or a 402 is by parking all the wheels at about 50, and then turn the dial through the number 50 region and seeing how many wheels are picked up or felt. This is called enumerating the wheels.

This article does not differentiate between these locks, for the drive cam is the same on both locks. This

particular drive cam poses many interesting problems, as well as keeping the drop-in zone a secret from the adamant manipulator. One of the most common problems is that the safe will not open when the correct combination is dialed.

This can be caused by the drive cam spring being weak and not allowing the split cam to properly align and let the fence drop into the gates. That is my first thought. The net result is that the lock will not open.

Photograph one shows the underside of the cam. It is distinguished by the 3 rivets located on the bottom of the cam as well as a split ring "C" clip that holds the cam together. Photograph two shows the top of the drive cam assembly with the

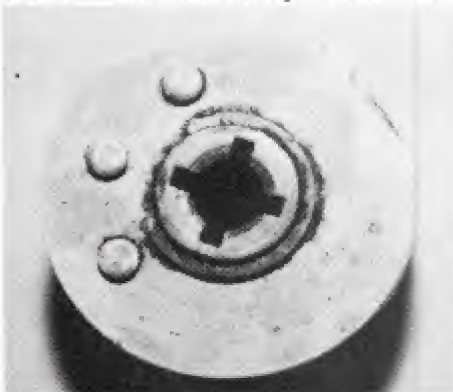


2. Bottom view of two part cam with drive pin.

rectangular drive pin and the two pairs of splining positions.

The first problem is to get the safe open. This can be accomplished by dialing the combination a few numbers higher and then lower, and rapping the dial and door with a dead blow hammer. Most times you will be able to get the lock open this way, provided the combination is correct. There are times I have been forced to drill (at #92 on a RH lock) and remove the lever fence from the locking lever. That is the worst case scenario.

Once we get the safe or chest open, we have the delightful duty of repairing the lock so that it works. If the combination was set and splined and aligned correctly, the problem is in the



1. Top view of Mosler MR302/402 drive cam. Note "C" clip and three rivets.

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drive cam assembly. There are three fundamental choices to make. I will expound on each of these briefly and let you, the professional safe technician, decide which is the best in your specific case.

The first choice is to replace the drive cam with a new one. Sounds easy, but if you have ever tried to get parts from Mosler, you know that this is more credulous than it sounds. There are other sources for this part, like Lockmasters, but you will have to get a price before you order, and probably make a minimum order to get it. If this part is the only thing that you need, it could cost the customer a lot of money and time to order the part.

If you are waiting for the part to be delivered, then much time may pass before the safe is put back into action. I will propose an alternative method to use while you are waiting for the MR/Split drive cam (which is followed by a long string of numbers in the Mosler catalog) for the MR302-402 lock.

The second method would be to replace the lock with another Group I lock. If, as sometimes Mosler does, an attachment is added to the combination lock bolt which is drilled and tapped to the end of the bolt, then a machine shop might be needed to attach the "blocker" bolt correctly.

My next thought would be to determine whether the safe or lock in question really needed a manipulation proof rating. If the lock is used in a government setting where security ratings are needed, then the first two options are your only two alternatives. If the MR rating is needed, then you must keep it! If the safe is used in a Mom and Pop restaurant, a small insurance office, a home, or any other location where easy access is required and no MR rating is indicated, then the next options can be used.

I know, who are we to determine what the customer needs. I answer that we are professional safemen and women, and we really know what the customer needs, in most cases more than the customer does. Security is our business. We must explain what we are doing and why.

The first option is to replace the Group I lock with a more common and usually stocked Group II lock. The Group II combination lock does not have any special manipulation protection built in, but will work properly when installed correctly. Again, however, the lock may have to



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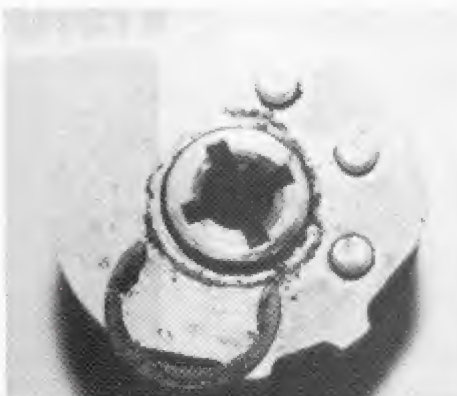
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be modified to work in the Mosler tradition.

If the customer wants to replace the MR (formerly, this rating was recognized by the government, but with the advent of the auto-dialer toys, the Mosler MR302-402 rating does not pass the government's new anti-manipulation anti-auto dialer regulations), then a new non-Mosler lock can be used. A group II lock is a Group II lock, in size and basic functions. The bolt of the lock may vary, but the mounting holes are the same. The last option is the one that I have used, the fastest and easiest to accomplish. It destroys the MR (old) rating, but the lock works quite well as a result. I have put this to use on safes that have high traffic. I have even modified working MR locks, and the customers love it. What you do is to take the split cam apart and remove the spring and movable part of the cam.

Photograph three shows the spring clip that holds the cam together. Pry it off! The cam will come apart as shown in photograph four. The inner bi-lateral spring is not shown. It nests under the movable part of the cam and three rivets.

Once the cam is apart, just put the spring clip back into its groove and re-



3. Removal of "C" clip from MR/ cam.

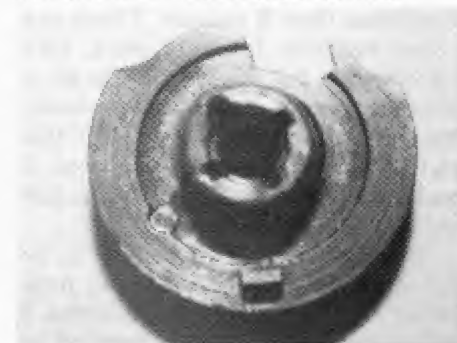


4. Split cam separated. Internal spring not shown.

assemble the cam to the spindle and spline it correctly. You do not have to remove the ball bearing in the lock case

(almost impossible to do without removing the entire lock case from the door of the safe or chest).

Photograph five shows the modified MR cam. Just put the spring and other part of the cam in your tool box to remind you to order the proper part, if you so desire. You and your customer will be amazed at how easily the lock works with the click-click removed.



5. Modified non/MR cam ready to be reinstalled.

I have Mosler lug door safes in service with this modification for a decade now without any problems. This is a simple solution to a complex problem. Modify and Prosper. §



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Access Control

Continued from page 40

access control system. The screen displays the different openings, users, timing options, etc. and allows the programmer to enter the parameters for the system.

Outputs. The alarm output is usually a relay that sounds a siren locally, activates a digital dialer to a monitoring service, flashes lights, activates a CCTV recorder or carries out some other type of warning function. This output can be activated by an alarm contact or door/lock status switch per the users programming.

The lock/strike is also usually activated by a relay to lock or unlock the door(s) lock(s). These relays typically offer both the normally opened position used for fail secure locks, and normally closed position for fail safe locks. The fail secure and fail safe designations will be covered in future articles.

And, finally, the record of system activity or audit trail is a recording and reporting of all the events the access system has experienced in a given time period. This record is usually put out to a printer. Further discussion of audit trails follow in the software heading.

Software. The software is the component that defines the system and its operations. The more sophisticated the software, the more features and options that are available to the user. It is the part that dictates the type of reader used, the number of openings

the unit can operate, the quantity and status of users, entry/exit delays, other timing functions, alarm and status switch responses, and audit trails.

Despite the differences in software and system capabilities, however, there are still three basic functions the software must address: the number of openings it can operate, the quantity and status of users, and timing.

The number of openings is pretty basic. Simpler systems tend to be single door or stand alone units using one relay output for the door lock. More complex units may operate several doors, using a relay output for each door. The more advanced systems, usually PC based, are able to operate hundreds of doors. (See illustration 3.) Typically these systems have a main or master control panel that operates several doors. When a master panel has reached its limit of openings, another master panel is added to the system. All of the master panels are centrally controlled and programmed by the computer.

The software also determines how many separate users a system can handle. Simpler systems allow from two to several hundred different users. More sophisticated systems may be capable of thousands.

Along with the number of users, the system needs to know the status of the user. Small systems generally separate a primary or master user, the one who does the programming, from a secondary user. More complex systems

may attach levels of authority to users, much like a masterkey system.

Timing affects several features and functions. All systems, however, have an entry/exit delay time. This is the activation time of the lock relay. Simpler systems offer programmable times from momentary (a single .1 second pulse) to several minutes, or latching. Latching is when the relay is activated continuously until the user deactivates it. The latching function is often used in situations where a user may need a door opened for an indefinite period of time.

More complex systems integrate a door status switch with the entry/exit delay time. This setup is used to prevent what is known as a follower situation. Without the use of a status switch, a strike/lock relay once energized or activated, continues until the end of the delay time, even if the user has already passed through the door and the door is closed. This means that for the duration of the delay time, the door is unlocked, regardless of the door's status (opened or closed). What happens?

Let's say user A enters a door that has a 30 second delay. After activating the system, it only takes user A 15 seconds to open and pass through the door. This leaves 15 seconds that the door is left unlocked. Any person, authorized or not, following user A can access that door without the need to activate the system.

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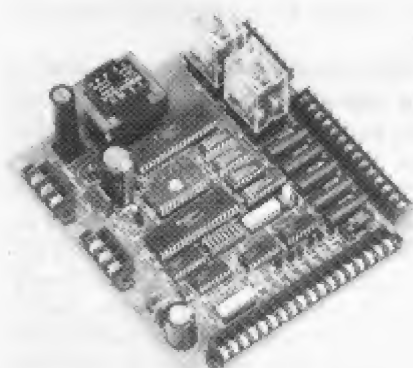
Electronics

"Have a look at products from this month's featured companies."

Dortronics Systems Inc.

Dortronics Systems Inc. of Sag Harbor NY is a manufacturer and distributor of quality electromagnetic door locks, switching control system controllers and power supplies.

The 1110/1120 Ultralock series of surface mounted electromagnetic locks have been uniquely designed for easier and quicker installation which allows for adjustments even after mounting. Dortronics Systems has also optimized the holding force of their magnets while maintaining one of the smallest physical profiles in the industry. This was accomplished through extensive testing and development at their Long Island manufacturing facility where Dortronics produces its own electromagnetic coils and assemblies. In house production allows Dortronics systems the desirable capability to ship readily from stock.



Dortronics Systems Inc, as the name implies is a complete systems component source, prepared and equipped to provide competent technical assistance, versatile products and prompt delivery.

One of the latest products introduced by Dortronics Systems is the Datalock Door Controller. The Datalock consists of a micro processor board with an Eprom chip. Upon receiving a customers specifications

and operation sequence, a program is then written which will monitor the inputs to provide the functional sequence which the customer desires.

The program is then "burned" into an Eprom chip. The chip is installed in the Datalock, and a final operating sequence test is performed before shipment. If at a future date the customer decided to change the parameters he simply provides his new specifications to Dortronics and the new Eprom is burned in and sent to the customer, thus no interruption in service is necessary.

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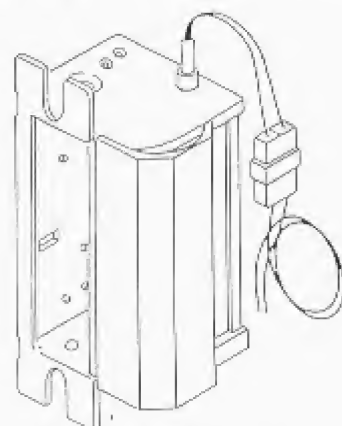
Hanchett Entry Systems, Inc. has been in the business of developing and manufacturing electric strikes and related products for more than 16 years. The H.E.S. approach has always been to produce high quality, reliable products with innovative designs for today's market.

The H.E.S. 1003 series heavy duty electric strikes have been uniquely designed with the strength, durability and versatility needed to accommodate the variety of different locks and applications found in the industry. Each of the 22 different models are non-handed, fully interchangeable and can be installed in hollow metal, aluminum or wood jambs. These units are U.L. Fire Door and Burglary Resistance listed. They have been tested to withstand a force of over 2,300 lbs before releasing and are tested to exceed 500,000 cycles of operation.

H.E.S. has now designed the 1003 series into a complete, universal electric strike package called the 1003 C-Pac. The 1003 C-Pac was developed specifically for the mobile locksmith/security installer, to provide

them with a complete electric strike package which will give them all of the flexibility of a fully stocked distributor.

The 1003 C-Pac contains a model 1003 universal electric strike and all parts necessary to accommodate cylindrical locksets, offset mortise latchbolts and full mortise locksets with a latchbolt and 1" deadbolt. Also included in the 1003 C-Pac is the model 2001 plug-in bridge rectifier for AC operation and all installation hardware necessary for metal and wood jamb installations.



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All Nel-Tech keypads are separate

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by Carl Cloud

Is Safe Work For You?

"Finding a fulfilling trade that pays a decent wage, while being fun can be a lifetime project for many people."

Last February began my thirty-first year of learning in the world of safes and vaults. I say "learning" because every job you do, which encompasses all facets of locksmithing, and not only safe work, must be a learning experience. If you haven't learned something new about your craft today, your interest in the work has waned or emotionally you are not compatible to the tasks. Finding a fulfilling trade, one that gives a sense of accomplishment, pays a decent wage while being fun, is a lifetime project for many people.

Should you consider learning safe work? I hope to enlighten and provide some provocative thoughts for you to ponder. The work is often thought of as the ultimate in the security field — filled by only the profession's elite. Those who are successful have become so by enduring punishing physical and mental hard work. They have a persistence toward perfection and a love affair with their labor. Regrettably, you won't find any safe technicians among the "Who's Who" list of millionaires within the country.

Physical Condition. If you are over forty-five years old, you are starting a little late in life. There are years of learning (and mistakes) to perfect the procedures. By the time you have it all figured out mentally, the body may not be capable physically. The work can be very strenuous. It needs an agile body that's young and strong with an inquiring mind eager to learn.

Good eyesight is essential. Eye glasses are a handicap. I know accomplished safe techs who wear glasses, some with bifocals. They, like me, cuss the need to use glasses. There is either sweat dripping onto the lens and blurring the view or you simply can't position your head well enough to totally see the project. Often, attempting to see the bottom of a hole in a safe door is similar to looking through a drinking straw. If your eyes can't focus down the hole, you can't see to diagnose

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Continued from page 72

the problem, let alone determine a solution.

Mental Condition. How is your attitude? Are you compulsive? Jumping into projects without examining all the aspects of your actions? In safe work, you may find yourself biting off more than you can chew. Patience as a virtue is essential for the successful safe tech, along with calm, deliberate and precise work habits. The hyper individual will slam a spinning drill bit entirely through the wheel pack of a safe lock; the same beneficial effect as driving a nail through the face of your wrist watch!

Safe technicians are not allowed to have an ego. Oh sure, you'll hear some rather impressive opening stories when they gather, but to whom else can they brag? Only they know how proficient they are at their trade. When they complete a very complicated safe opening, utilizing uncanny precision, unknown depths of deductions, who appreciates it? The customer has no comprehension of the expertise required to open his safe. Even if you told them, they wouldn't know what the hell you were talking about. The safe tech packs up his tools, pats himself on the back and says to himself, "Damn, you're good!" It's often an unappreciated and lonely job.

Education. Many locksmiths are intimidated by safes. They have heard all of the horror stories and don't want anything to do with them. If you are easily intimidated, safe work will lead to an early gathering of family for the consoling of your first stroke or heart attack. The medication for intimidation is education. Once you understand the workings of this tiger, it is easily tamed into a cuddly pussycat.

Where do you start your safe education? Take safe classes. Attend a "Basic Safe Class." Classes are presented by local locksmith associations, at ALOA and SAVTA conventions, and specialty seminars. If you can't get to a class, contact a school

providing a home study course. The least effort you can make is to purchase my book, *The Guide to Drilling Safes* published and distributed by *The National Locksmith* magazine.

Those doing automobile locksmithing are aware of the importance of being updated on all the new car models and locks. It is the same for the safe technician. He must be kept abreast of the new technology or techniques used within his trade. The mechanical combination lock is already becoming a part of the circuit board and computer chip mentality. Like it or not, electronics will be a segment of your future.

Subscribe to every trade magazine and read books relating to the safe field. Make notes or take pictures of safes and start compiling a folder of safe information. You must be willing to devote individual efforts to the learning if you expect any success.

Tools of the Trade. As a working locksmith, you probably have all the basic hand tools required for safe servicing or repair. A monetary amount must be set aside for the specialty tools required for safe work. The cash amount depends upon the depth of work you wish to undertake. For example, \$2,000 will supply you with a starter's kit viewing scope, a light duty pressure bar with a decent drill motor (for drilling hard plate) and a small handful of carbide drill bits. If you would like the fiber optics halogen light source for the scope, add \$600. How about a camera and a monitor so you won't have to squint into those tiny holes? Add \$1,300.

Other items you should consider are: sets of change keys, emergency dials, dial puller, a good supply of punches and chisels, dead blow hammers, a tap and die set, pry bars, special lubricants, a variety of sizes and lengths of carbide drill bits, a set of safe lock drill templates, a safe door

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repairing kit for fire insulated and steel safe doors, special viewing optics such as an otoscope or an ophthalmoscope. All the incidental tools can be found in Lockmasters Tool Catalog. The well equipped safe technician will have invested between \$4,000 and \$5,000 in his *basic* tools.

You say, forget all that drilling stuff, I'll just buy an automatic dialer. The \$2,000 dialer is an ultra high-tech device but has its limitations. It doesn't open all brands of safes or safe locks. In addition, the machine may require over thirty hours attempting to find a combination. You must set and wait or pay someone to be at the customer's site to monitor and protect your equipment. If the safe is dialed open during the middle of the night, you may be responsible for the contents. Note: Have lots of liability insurance.

O.K., let's do it the easy and quick way. Buy a burning bar kit. A mini thermal lance costing only eighteen hundred bucks will put a hole in any safe, in a matter of seconds; may burn up the contents of the safe, and, with a little carelessness, burn down the entire building housing the safe.

Maybe we should take some precautions and move the safe out the building into a parking lot before firing up the burning bar.

You do have equipment and manpower to move a two thousand pound safe don't you? No? Better put another \$2,000 or so in the safe business operating pot.

By the way, with all these holes you have been creating in safes, you do have a welder and know how to weld, don't you? Hum, maybe you know someone who welds or you can borrow the welder from your no good brother-in-law. (Memo: He never cleans anything. Don't ask to borrow his clogged-up paint spraying equipment for painting the damaged safe

door.)

I have poked a little fun at some of the items needed in a fully operating safe business. If you understand and know your limitations in safe work, the financial outlay will be justified.

If your intent is to only tackle the light gauge safe units, such as the little inexpensive imported or home fire resistive safes, very little additional expense is needed. Some of these safes aren't equipped with safe lock protecting hardplate. Any drill motor with a high speed drill bit can make full penetration. On those occasions when hard plate is found in these safes, common masonry bits sold at your local hardware store will work fine. If you have taken my advice and soaked up some education, you will drill these safes at precise drill point locations. You won't need those expensive scopes, often a small pen light will suffice.

Parts Inventory. There are only four major safe lock manufacturers in the US.: Sargent & Greenleaf, LaGard, Mosler and just recently, Ilco Unican. The locks produced by these companies will retrofit with one another with little or no modifications. This means, for the individual just starting safe work, it is possible to stock only one standard lock. For example, safe lock Model S&G 6730 with a D300 dial and an R211 dial ring will fit in place of any other standard combination lock.

Some safe manufacturers produce their own lock, such as Sentry or FireFyter. When replacement parts for these safes are needed, you must contact the manufacturer. They will require the model of the safe to insure supplying the correct

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Bits & Pieces

Informative Tidbits For The Security Industry



by Tom Seroogy

Jet is now offering key machine cutters and a dealer price book. The book features key blanks, key machines, cutters, and other items offered by Jet. Each item that is displayed is followed by the unit price. Contact a local Jet distributor or write to Jet Hardware Mfg., 800 Hinsdale St., Brooklyn, NY, 11207.

Another new handbook just released by Arius is the CCTV and Access Control Handbook. While the book serves as kind of a mini-catalog of the various items that Arius distributes, it also contains many articles covering different aspects of CCTV and access control. Not expected, is the true technical nature of the articles, including several on different types of lenses, lens performance and durability; covert surveillance using miniature CCD cameras; and sections on lens and switcher terminology (I know - "what's a switcher?"). Others include information on when to use fiber optics, delayed exit systems, shear magnetic locks and more. To receive a copy of the handbook, call Arius at 508-875-4001 and ask for Margo Kall.

Some more news on the 1993 Corolla and Prizm. If ordered from the dealer there are four different ignitions for the Corolla sedan and two for the Prizm. Dealer ignitions for the Corolla include an ignition each for the US built standard and tilt column, and for the Japanese built standard and tilt column. The Prizm is listed as standard or tilt column.

For those who like to keep these parts in stock (dealer item only, at this

time) only two ignition cylinders need to be ordered to fit any one of these six vehicles. Toyota part #69057-12250 fits the US built vehicles with standard or tilt column, the Japanese built model with tilt, and the Prizm with standard or tilt column. The only difference on the Corolla versions is the ignition housing, the cylinders are identical. The difference with the Prizm cylinder (Geo part #94853751) is that all Corolla facecaps are black and the Prizm is chrome, otherwise they are identical.

The other ignition is Toyota part #69057-12200. This fits the Japanese built model with the standard column.

To determine whether the car is US or Japanese made, look at the first number of the vehicle identification number (VIN). If the number is a "1" the car is built in the US, if it is "J" it is built in Japan.

The cost of either cylinder is roughly \$35.00 to \$45.00.

The dealer may also ask whether the model is an alarmed or security model. This is in reference to a built in security system available on the Japanese built models only (Prizm does not come with an alarm version). This feature does not affect the ordering of the ignition, but may affect the door lock ordering.

The door locks on the Corolla and Prizm are handed and identical. The cylinders and plugs of the Corolla alarmed and nonalarmed versions are identical and interchangeable. The alarm version has a removable plastic switch attached to the back of the lock. When making a repair or replacement, unless this switch is damaged and needs replacement, order the less expensive nonalarmed lock.

Nonalarmed Toyota door lock numbers: Left - #69052-12340, Right - #69051-12340. Cost is approximately \$27.00.

Alarmed Toyota door lock numbers: Left - #69052-12370, Right - #69051-12370. Cost is approximately \$40.00.

To rekey these locks use Auto Security Products pinning kit #A30-108.

Making it easy, that's the way I like it. NT Monarch is introducing a new fully adjustable, concealed vertical rod device for their 17, 18, XX and SC series exit devices.

By removing the trim plate on the 17 and 18 device, both top and bottom rods can be adjusted with a screw driver. For the XX and CV devices, removing the rod side of the device from the door allows access to the adjusting screws.

The new rod device is made to make the final adjustments easy. Many devices require some disassembly, and in some instances, removal of the door to make adjustments to the unit. The only tools needed for the adjustments on the Monarch device are a couple of screwdrivers.

If for any other, locksmiths may consider doing alarm work for this reason — monitoring. Many of your alarm customers may request that their home alarm be hooked into the police or fire departments. Because most cities don't allow direct connections to the police or fire departments (with some exceptions), home alarms are connected to a monitoring company that dispatches the police or fire department when an alarm is sounded.

These companies, of course, charge for this service, costing the customer anywhere from \$10.00 to \$30.00 per month. As the alarm service company, you receive a residual from this fee, ranging from \$4.00 to \$12.00 per month, depending on the service you contracted. While that single customer may not bring in a lot of money, developing an alarm customer base of 100 or more can add a substantial amount of continuing

Continued on page 109

The Lighter Side

Ouch!



by Sara Probasco

"Looks like they're at it again," Don said after the man had left our store.

"Who's at what again?" I asked.

"That guy who just left wanted me to duplicate an ASSA key for him without authorization. It could be another sting operation. He was trying every trick in the book."

"Like what?"

"First, he gave me the old 'Everybody else with a key is out of town for the weekend—what if I lose the only one I have?' routine. Then he launched into 'Well, to tell you the truth, the guy who originally set up this system leases the building from me, and he never got around to giving me a key—even though our contract says he has to. He asked me to check on things while he was out of town, and he told me to get a duplicate made for myself while I had his key.' And when I didn't fall for that, he switched tactics and tried the old, 'Look, Buddy, I was just pulling your leg, a minute ago. Actually, the lock this key fits is mine. I bought it off an old boy at an auction last week. Now, if you won't make me a copy, I'll just have to get it done somewhere else.'"

"And you told him...?"

"To go right ahead. No way is he going to get that key duplicated anywhere in these parts! Let him try." Don chuckled to himself. Then he flipped open my Rolodex, picked up the telephone on my desk, and punched in a number. "Mr. Granger, please," he said into the handset.

"Who are you calling?" I whispered.

Don looked up. "The man we installed those ASSA locks for in the first place. I think he should know somebody's trying to breach his system." He turned his attention to the voice on the telephone. "Mr. Granger?

This is Don Probasco with A-I Lock & Key in Uvalde. A Jake Hanover was just in here asking us to duplicate one of your ASSA keys. However, he didn't have the necessary authorization. If you'll fill out one of the forms I left with you and have him bring it in, we'll be glad to make that key for him."

Hanover never did come back to our store, but during the next week, we learned from a local hardware store and a couple of locksmiths in San Antonio (85 miles away) that a man fitting his description had been in trying to have an ASSA key duplicated, to no avail.

A few weeks later, Mr. Granger called to ask if Don could install an ASSA system at two other locations of his business. Don still wonders if Granger was "checking out" both us and the ASSA system as to vulnerability versus integrity. At any rate, he seems pleased with his choice.

"Sting" operations have run the gamut across the country, over the past couple of years. They recently hit San Antonio with a set-up whereby a woman-in-distress called many locksmiths asking if they could get her into her locked house, as she had supposedly lost her keys. Naturally, the reporter had arranged with the home owner to "borrow" the house for the occasion, and there were numerous hidden cameras and microphones about, waiting to catch the unsuspecting locksmith as he picked open the door, and woe to any who failed to require proper credentials from the customer.

The aspect of this that rankled so many locksmiths in the area was, those contacted who said they would require proper identification and proof of residence at the locked house were told "never mind." Only those locksmiths who were careless or imprudently eager to help were filmed and recorded for voracious viewers of *Eyewitness News* to observe.

When a member of our locksmith association requested "equal time," the TV newscasters agreed and did, in fact, tape a 20 minute interview. However, only about 15 seconds were aired, giving

little of "the rest of the story," from the locksmith's point of view.

Needless to say, this is one of the problems with media sponsored "stings." They often seem to be after a story, rather than the truth of the matter. As a result, facts may sometimes become distorted.

Don interrupted my thoughts. "Speaking of sting operations, did I tell you what the Feds pulled over in Pecos, recently?"

"I overheard you telling Dave something about a prisoner who had a key to the jail. What was it all about, and where?"

Don chuckled. "This took place in the Federal detention facility, which is not a maximum security prison, thank goodness. As I understand it, the key wasn't to the cells or outside gates, but to the offices and various access areas within the facility. Still, somebody kept getting into these locked areas, and the warden couldn't figure out how they were doing it, so the FBI put a plant there. "After posing as a prisoner for four or five months, sure enough, the G-man began to hear rumors about a master key that would open all of the internal locks. He quietly put out the word that he might be interested in purchasing such a key, if one existed."

"And did it?" I asked, all ears.

"You bet!" Don replied. "One of the prisoners came up with a master that would open every Sargent lock in the place, and there were a bunch of them. No telling how long he'd had access to everything or what all had been pilfered. It took a locksmith about fourteen hours to rekey all the locks, even with the help of a couple of inmates."

"Or maybe because of their help," I laughed. "Can you imagine what a key like that would bring on the black market, if a person was willing to sell it?"

"Oh, I don't know. That would probably depend upon the middle-men involved. In this case, I understand the G-man offered the prisoner a couple of thousand for it, but with the warden in the middle, all the fellow got was an additional ten-to-twenty." §

April 1993 87



Beginner's Corner

Install A Digital Door Lock

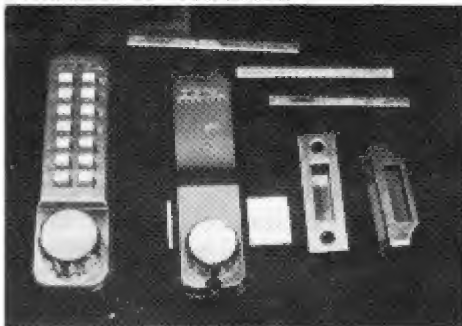


by Eugene Gentry

I have seen the Digital Door Lock and other push button locks advertised, and have always thought they had many advantages over a keyed lock.

Last week, a customer called to have a Digital lock installed on a metal storm door. This is an interesting lock, so I will pass on some information on finding the combination for an existing lock, changing the combination, and installing the lock on a door.

The Digital Door Lock is a mechanical push button, combination lock that requires no wires or batteries. (See photograph 1.) It has fourteen buttons, ten numbered and four lettered, and the combination can have up to seven numbers or letters. The lock is constructed of heavy duty metal. The 8000 series has a laminated deadlock for installation of the striker on the jam. The 8010 series has a mortised deadlock for installation in wood doors.

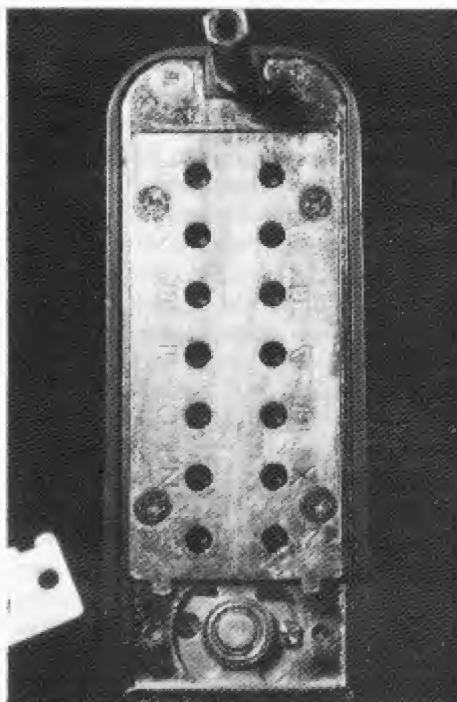


1. A digital door lock.

The lock has a thumb turn on both the front and back side for lock and unlock. Included with the lock are three spindles of varying lengths for different door thickness.

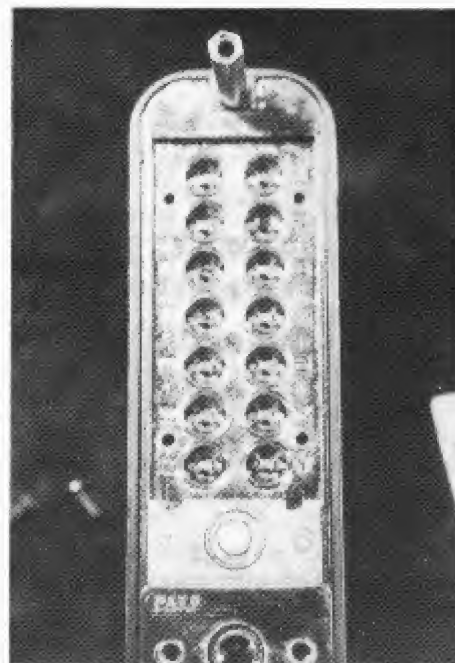
To find the combination of an existing digital lock, the lock has to be removed from the door. Looking at the back side of the body (see photograph

2), you will see fourteen holes and in each hole will be either a red tumbler or blue tumbler. The red tumblers will be the combination. On this lock the combination is C-1-2-8-9. The buttons can be pushed in any sequence.



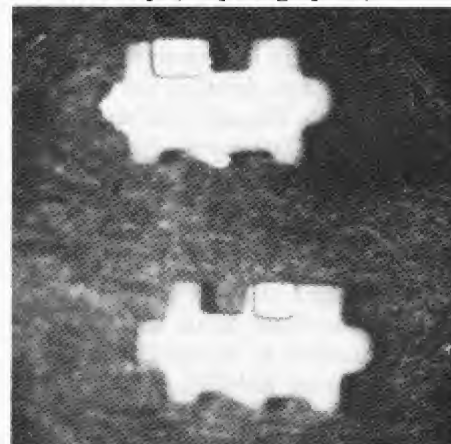
2. Tumblers can be seen through holes on the back side of the base.

To change the combination before installing, keep the outside body, face down, in a horizontal position. Remove the four red-colored screws on the back side and lift the lid slowly. Handle the lid carefully so as not to disturb any of the springs on the back side of the lid. (See photograph 3.) The combination is made up of the "C" number plus the red colored tumblers, which are the key tumblers. The blue colored tumblers are the keyless tumblers. The "C" number has to be used at the beginning of each combination as it restores the tumblers to the free position. You can exchange any red with any blue tumbler to make up the combination that you want. IMPORTANT: Push and hold down the "C" button as any key or keyless tumbler is relocated. Do not



3. Remove the lid on the back of the base to gain access to the tumblers. move the "C" tumbler.

Use the tweezers to pull each tumbler out of the hole. The tumbler must be inserted so the square cut on the tumbler is on the outside edge of the lock body. (See photograph 4.)

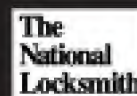


4. Insert tumblers with square cut on outside of body.

Replace the lid carefully using the four red colored machine screws, and make sure the lock is operating properly before installing.

Check to see if the hinges are on the

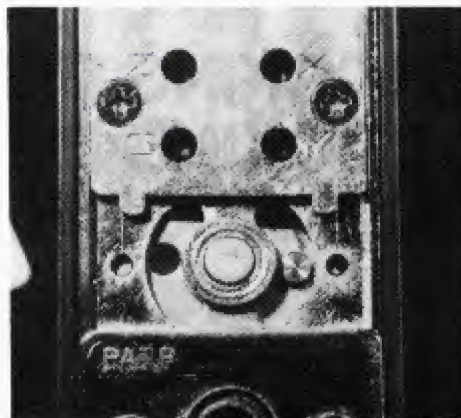
Continued on page 90



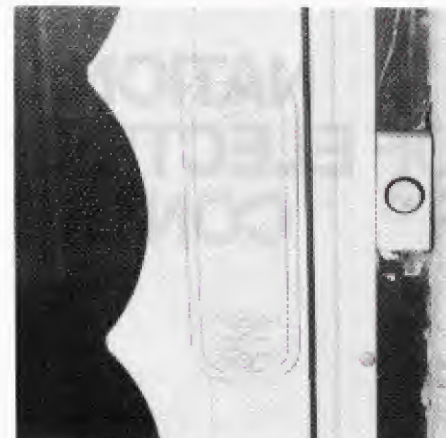
Continued from page 88

left or right of the door. The Digital lock is designed so the thumb turn on the front will lock the door but will not unlock it without the proper combination. If you need to change the setting, remove two blue colored screws and lift out small rectangular lid. (See *photograph 5.*) Relocate the pin from the left the right side or right to left as needed, and replace the lid securely.

Determine the preferred location of the digital lock, then use the template that is included to mark the holes. (See *photograph 6.*) Drill the holes with a 5/16" bit. (See *photograph 7.*) Place the rubber spacers on the front case and



5. Relocate pin (right center) for right of left side hinges on door.



6. Use template to mark door.

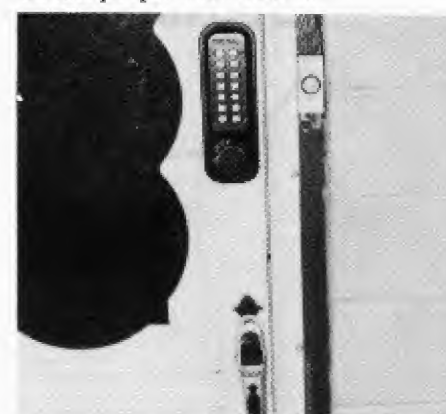


7. Drill 5/16" holes.

rear case, then place the correct length spindle into the rear turn knob. I am using the shortest spindle for this installation as the storm door is only one inch thick.

Now push the legs of the front case through the holes, put the back case on and tighten the two screws that hold it together. Mark the hole for the striker, chisel out the wood and install the striker.

These push button locks are attractive and are advantageous when extra keys are not wanted. (See *photograph 8.*) They are good for businesses with doors where only certain people have access.



8. Completed installation.

For more information contact: Door Systems Inc. at (215) 672-8087. §



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Shop Talk

Helpful Questions and Answers

Written by all of the following authors: Dale Libby, Robert Sieveking, Dave McOmie, Shirl Schamp, Don O'Shall, Jack Roberts, and Tom Seroogy

Shop Talk answers readers questions on any locksmith related topic. Only letters judged to be of general interest will be published. We regret that we cannot answer individual letters. Because of the volume of mail, only those questions answered in the magazine will receive answers. Send your locksmith questions to Shop Talk: *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

Q: How do you find the combinations for the Nissan and Ford/Lincoln keyless entry systems?

*Terri, IA and Bobby Bynum
Tennessee*

A: The keyless entry code can be found on the trunk hinge or on the control module of the Ford and Lincoln. On the Nissan, the master code can be found on the keyless control module and will be used to program and change the user code.

Q: Is there any company out there that makes replacement facecaps for the 1984 1/2 Ford door locks?

*James W. Mortimia
Iowa*

A: Yes. Both All-Lock and Auto Security Products provide replacement facecaps for the 1984 1/2 Ford. ASP's part #P42-201 for the round, chrome cap and part #P42-202 for the round, black cap. All-Lock's part #6660 for the round, chrome cap and part #6726 for the round, black cap. Both companies also offer a variety of facecaps and lock accessories for the Taurus/Sable, Lincoln and other ten cut Ford door locks. It is probably best to call a local distributor and ask for their catalogs. ASP offers an application catalog #11A. All-Lock is currently updating their catalog, due out in early 1993.

Q: Where can I locate a supply of vintage (pre 1967) Chrysler locks and/or pinning kits? I have located sources for Ford and Chevy, but absolutely nothing for Chrysler.

*Steven R. Culp
Hawaii*

A: Well, Steve, I had about as much luck as you finding a Chrysler supplier. What I did find, however, is that some of the early Chrysler locks were made by Yale. A few of them were later picked up by Briggs & Stratton and are currently discontinued. The most recent of these had a large face and came in two versions depending on the cam. These were the Briggs part #604027 or #607733, now discontinued, coded pairs. What may be necessary, is to hunt flea markets and antique auto clubs and restorers.

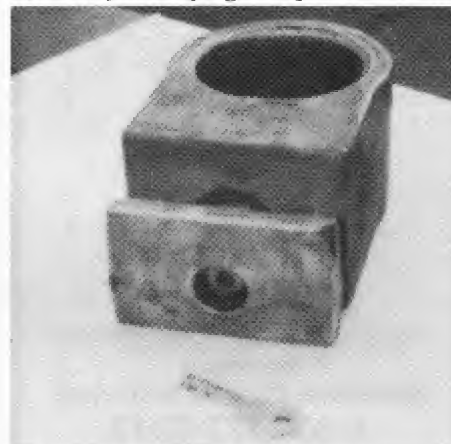
Q: I had a customer who wanted a key made for a Kennedy tool box, but I could not find the right keyblank. The only thing that they had on the key was the code on one side and the Kennedy name on the other. I tried to write to the company but they said they do not give that information out. Can you help?

*Marc Reible
Wisconsin*

A: Yes and no. Unfortunately, you forgot to include the code number so I wasn't able to match a key for you. Also, like you, I contacted Kennedy customer service. As with your case, they would not release any information (don't ask me why they call themselves "customer service". Apparently making a buck is more important than helping a customer). What I was able to do, however, was locate several different code series and a few of the lock manufacturers they used. While Kennedy does use a couple varieties of flat steel keys, they also use locks from Ilco, Hudson and Corbin. Of those I was able to find,

Kennedy does use these code series: Corbin K101-299, using the Corbin 5865JR keyblank; Hudson XK1700-1949 using the H17 keyblank and Hudson K1200-1699 using the 20WX/20KT keyblank; and Ilco T1001-1750 and, possibly, Ilco BL701-900 both of which use the L1054B keyblank. If these blanks do not fit, try other keyways from these three manufacturers. While this may not be a conclusive list of Kennedy's lock suppliers, it should cover a few.

Q: A customer brought in a kingpin lock manufactured by Transport Security, Inc. (see photograph 1) that uses an Abloy lock. How do you remove the lock for rekeying or replacement?



1. A Kingpin lock.

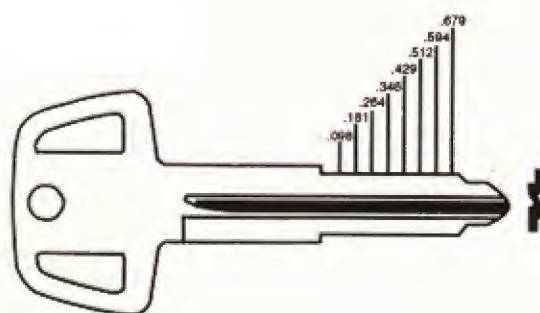
*George Meyer
California*

A: Thanks for your thoroughness in describing the lock, George. I was able to contact Dave Falk of Transport Security and ask him the question. According to Dave, the unit is rekeyable, but you will need a welding torch to take it apart first. To save the expense and trouble of cutting and welding, Dave suggests you send the drawer piece to Transport Security, Inc., 508 Industrial Blvd., Waconia, MN 55387. They can do this for you, and it will be about one-third the cost of a new kingpin lock.

Mitsubishi Codes

30010-32009

Part 2



DEPTHS

1- .232 4- .185
2- .217 5- .169
3- .201

KEYBLANKS

Silca Mit 11R
Curtis Mit 3/Mit 4
Taylor X224

Codes © HPC, Inc.

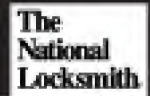
Continued on page 98



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Continued from page 96

30010-32009 MITSUBISHI
Keyblanks:
Silca MIT11R
Ilco X224
Curtis MT3

Code Machines:

1200 CM No. XF89

| 31010 | 31060 | 31110 | 31160 | 31210 |
|-------------|-------------|-------------|-------------|-------------|
| 10 41214145 | 60 41234343 | 10 25234343 | 60 32141234 | 10 0 |
| 11 0 | 61 34141412 | 11 25214523 | 61 25212123 | 11 54345414 |
| 12 43432141 | 62 12545252 | 12 21412143 | 62 41414543 | 12 14341232 |
| 13 0 | 63 14521214 | 13 23414541 | 63 54141434 | 13 32125232 |
| 14 34125414 | 64 52345212 | 14 52325214 | 64 41252345 | 14 21234525 |
| 15 12541454 | 65 0 | 15 14523252 | 65 21214541 | 15 21252343 |
| 16 34325214 | 66 0 | 16 0 | 66 25214123 | 16 52543414 |
| 17 45252125 | 67 12521454 | 17 34525412 | 67 41212545 | 17 21254145 |
| 18 32541254 | 68 41232123 | 18 0 | 68 23212523 | 18 0 |
| 19 34321414 | 69 23412145 | 19 41212521 | 69 0 | 19 0 |
| 20 43254123 | 70 23414523 | 20 21454123 | 70 52143434 | 20 52525234 |
| 21 45414521 | 71 41454325 | 21 0 | 71 52545214 | 21 12525254 |
| 22 21412345 | 72 43452525 | 22 12525232 | 72 41412123 | 22 45454521 |
| 23 34525212 | 73 43412345 | 23 52345452 | 73 21414325 | 23 34521254 |
| 24 45412541 | 74 14345214 | 24 0 | 74 0 | 24 25414523 |
| 25 34545214 | 75 0 | 25 0 | 75 32325414 | 25 34541252 |
| 26 0 | 76 23414325 | 26 54545214 | 76 0 | 26 25452325 |
| 27 41252121 | 77 43254521 | 27 34143452 | 77 41412323 | 27 12523432 |
| 28 12521432 | 78 0 | 28 25234321 | 78 14343252 | 28 0 |
| 29 25454145 | 79 54521254 | 29 34545252 | 79 25254541 | 29 0 |
| 30 45414121 | 80 54323414 | 30 32521432 | 80 41412341 | 30 12125452 |
| 31 32141454 | 81 14545212 | 31 0 | 81 21452541 | 31 45452345 |
| 32 45234343 | 82 52525412 | 32 0 | 82 54123454 | 32 34541454 |
| 33 0 | 83 45212523 | 33 43452341 | 83 34343452 | 33 43414121 |
| 34 52541212 | 84 34341212 | 34 32141414 | 84 23252345 | 34 43214521 |
| 35 12143452 | 85 0 | 35 12341214 | 85 45212341 | 35 25434523 |
| 36 12541452 | 86 54521434 | 36 23414345 | 86 32141252 | 36 0 |
| 37 0 | 87 14325412 | 37 0 | 87 0 | 37 41234543 |
| 38 0 | 88 12341234 | 38 41452521 | 88 21432525 | 38 43234143 |
| 39 34345254 | 89 34325212 | 39 0 | 89 0 | 39 41214321 |
| 40 52543412 | 90 43452145 | 40 25412145 | 90 12545214 | 40 23252145 |
| 41 14123432 | 91 25454523 | 41 45234525 | 91 43454525 | 41 21434145 |
| 42 54541252 | 92 25452143 | 42 14525234 | 92 12145212 | 42 34521432 |
| 43 0 | 93 32525434 | 43 54341252 | 93 25432521 | 43 21454521 |
| 44 0 | 94 12545412 | 44 0 | 94 54143254 | 44 41434521 |
| 45 23412321 | 95 34143454 | 45 0 | 95 41454341 | 45 0 |
| 46 52321454 | 96 34343252 | 46 54141212 | 96 45452341 | 46 0 |
| 47 0 | 97 32123452 | 47 25254345 | 97 41214123 | 47 43252323 |
| 48 14523454 | 98 32523214 | 48 21452145 | 98 0 | 48 14341432 |
| 49 54345232 | 99 52521254 | 49 0 | 99 54121432 | 49 23252545 |
| 50 54325412 | 00 45232545 | 50 43414125 | 00 41452141 | 50 25254121 |
| 51 52345414 | 01 0 | 51 54541434 | 01 41234143 | 51 45452543 |
| 52 21454341 | 02 34541212 | 52 25214143 | 02 34523434 | 52 45212141 |
| 53 25214125 | 03 34121414 | 53 14345412 | 03 43434541 | 53 0 |
| 54 52321412 | 04 54525412 | 54 12525434 | 04 41434523 | 54 14521232 |
| 55 0 | 05 41434543 | 55 12141254 | 05 52545412 | 55 54141452 |
| 56 25452521 | 06 14523432 | 56 25454125 | 06 54343412 | 56 0 |
| 57 45214143 | 07 0 | 57 14545252 | 07 0 | 57 54523212 |
| 58 34121232 | 08 45232121 | 58 0 | 08 43412121 | 58 32541414 |
| 59 45412123 | 09 0 | 59 43434521 | 09 45434121 | 59 41254325 |



Continued from page 98

30010-32009 MITSUBISHI

Keyblanks:

Silca **MIT11R**
Ilco **X224**
Curtis **MT3**

Code Machines:

1200 CM No. **XF89**

| 31260 | 31310 | 31360 | 31410 | 31460 |
|-------------|-------------|-------------|-------------|-------------|
| 60 25414521 | 10 34541234 | 60 54521234 | 10 52325414 | 60 45214523 |
| 61 34345214 | 11 25414343 | 61 52345412 | 11 52141452 | 61 52543452 |
| 62 23232521 | 12 52145254 | 62 43432541 | 12 0 | 62 54121254 |
| 63 41252341 | 13 21454121 | 63 12321412 | 13 21414345 | 63 52323434 |
| 64 23214523 | 14 41212125 | 64 25234121 | 14 32525234 | 64 45234143 |
| 65 14523214 | 15 43252543 | 65 0 | 15 34123232 | 65 54123412 |
| 66 34325232 | 16 32545212 | 66 0 | 16 52541412 | 66 32325214 |
| 67 21414541 | 17 12545234 | 67 34323452 | 17 54123252 | 67 0 |
| 68 52341454 | 18 45252141 | 68 0 | 18 14341234 | 68 43252125 |
| 69 14121254 | 19 54141234 | 69 32523254 | 19 41252543 | 69 21214145 |
| 70 54145432 | 20 14525412 | 70 45214321 | 20 25234325 | 70 43452143 |
| 71 41232345 | 21 43434121 | 71 45452123 | 21 0 | 71 52121214 |
| 72 12323452 | 22 45234321 | 72 21254523 | 22 25412525 | 72 25412543 |
| 73 0 | 23 12321414 | 73 52141454 | 23 14545254 | 73 14525414 |
| 74 45412321 | 24 52521454 | 74 54323412 | 24 32145212 | 74 34521454 |
| 75 32525452 | 25 43232541 | 75 52523214 | 25 52143454 | 75 14121432 |
| 76 21254525 | 26 14121434 | 76 34545452 | 26 0 | 76 12523412 |
| 77 52123454 | 27 45234345 | 77 52541254 | 27 0 | 77 12325452 |
| 78 0 | 28 0 | 78 25434125 | 28 12143414 | 78 41412525 |
| 79 12325212 | 29 0 | 79 32523434 | 29 52345234 | 79 12343414 |
| 80 14521454 | 30 23252143 | 80 34323252 | 30 21232541 | 80 34521452 |
| 81 41412541 | 31 23414145 | 81 25214323 | 31 52341232 | 81 0 |
| 82 23412325 | 32 23452523 | 82 34541432 | 32 41432525 | 82 34145214 |
| 83 34543412 | 33 14125432 | 83 54541412 | 33 0 | 83 41232323 |
| 84 25234141 | 34 43252121 | 84 52125454 | 34 12325254 | 84 25414141 |
| 85 21252143 | 35 14143412 | 85 54141412 | 35 14521412 | 85 43412321 |
| 86 41414125 | 36 34123414 | 86 34341234 | 36 45412345 | 86 25414541 |
| 87 12325214 | 37 52343432 | 87 0 | 37 32345212 | 87 32341432 |
| 88 45214525 | 38 45434125 | 88 52343434 | 38 45252345 | 88 43234523 |
| 89 54525432 | 39 12545232 | 89 41434323 | 39 0 | 89 23452343 |
| 90 12345232 | 40 14345234 | 90 32541452 | 40 14125252 | 90 25254143 |
| 91 14125452 | 41 21434523 | 91 23254145 | 41 0 | 91 52343454 |
| 92 32545214 | 42 54525234 | 92 25214325 | 42 43452521 | 92 21432141 |
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| 96 21412343 | 46 54325254 | 96 23452125 | 46 0 | 96 21434141 |
| 97 45232543 | 47 0 | 97 12121452 | 47 12545414 | 97 0 |
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| 05 54123254 | 55 23414321 | 05 52125432 | 55 45452145 | 05 54325232 |
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| 08 12523452 | 58 23434521 | 08 45234325 | 58 34521414 | 08 0 |
| 09 0 | 59 41432323 | 09 52541214 | 59 34541414 | 09 54145434 |



30010-32009 MITSUBISHI

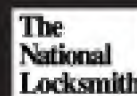
Keyblanks:

Silca **MIT11R**
Ilco **X224**
Curtis **MT3**

Code Machines:

1200 CM No. XF89

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|-------------|-------------|-------------|-------------|-------------|
| 10 14521254 | 60 41214523 | 10 0 | 60 25254125 | 10 54321452 |
| 11 21254521 | 61 41252323 | 11 0 | 61 43254121 | 11 32525212 |
| 12 32125254 | 62 0 | 12 45252543 | 62 52125452 | 12 54321252 |
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| 18 32525414 | 68 54143412 | 18 45452321 | 68 0 | 18 43214143 |
| 19 43412145 | 69 14123214 | 19 41452125 | 69 12323412 | 19 54145412 |
| 20 25412341 | 70 14523434 | 20 14123232 | 70 32341414 | 20 25414545 |
| 21 0 | 71 25252123 | 21 41454143 | 71 52341212 | 21 25212323 |
| 22 25254141 | 72 32525254 | 22 43412521 | 72 52325212 | 22 41254141 |
| 23 41432321 | 73 0 | 23 54523252 | 73 0 | 23 32345234 |
| 24 25412343 | 74 14143234 | 24 45212143 | 74 0 | 24 43414541 |
| 25 0 | 75 21414143 | 25 25454141 | 75 23252341 | 25 0 |
| 26 14125412 | 76 32145234 | 26 23234521 | 76 41412321 | 26 25432341 |
| 27 12525412 | 77 45434123 | 27 41254343 | 77 32145232 | 27 23414125 |
| 28 23452341 | 78 52141234 | 28 43234141 | 78 14145234 | 28 0 |
| 29 32143414 | 79 14325252 | 29 54143414 | 79 12521434 | 29 52525432 |
| 30 25252541 | 80 25434521 | 30 41232525 | 80 14345212 | 30 32345412 |
| 31 14123414 | 81 41234525 | 31 25432525 | 81 41452145 | 31 32545252 |
| 32 32125214 | 82 41252541 | 32 25232143 | 82 0 | 32 41454321 |
| 33 12145452 | 83 52321432 | 33 0 | 83 41214325 | 33 45452521 |
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| 42 21252141 | 92 25212141 | 42 12325232 | 92 21252325 | 42 23254123 |
| 43 12523234 | 93 32545414 | 43 25234123 | 93 45232341 | 43 43254125 |
| 44 54145234 | 94 41432325 | 44 0 | 94 32541232 | 44 14145214 |
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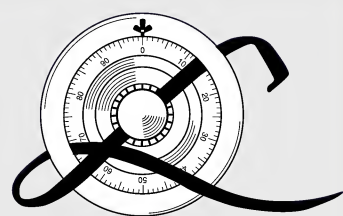
Keyblanks:

Silca MIT11R
 Ilco X224
 Curtis MT3

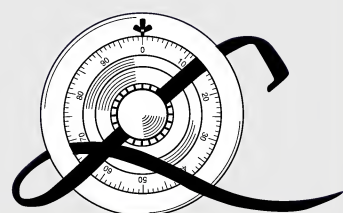
Code Machines:

1200 CM No. XF89

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| 63 43414523 | 13 23254523 | 63 0 | 13 43234541 | 63 52125254 |
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| 69 45412323 | 19 14123412 | 69 45232325 | 19 52523452 | 69 32141432 |
| 70 41452325 | 20 45234541 | 70 52345432 | 20 0 | 70 32121414 |
| 71 0 | 21 45212321 | 71 14541452 | 21 0 | 71 25454521 |
| 72 25232141 | 22 23454341 | 72 45412125 | 22 21234341 | 72 0 |
| 73 25412521 | 23 0 | 73 0 | 23 0 | 73 0 |
| 74 23232541 | 24 25252543 | 74 54521214 | 24 21214143 | 74 52143414 |
| 75 0 | 25 52141412 | 75 0 | 25 14525232 | 75 54143232 |
| 76 25414143 | 26 41254525 | 76 0 | 26 14121234 | 76 45414143 |
| 77 54521212 | 27 25412523 | 77 34323414 | 27 34541412 | 77 0 |
| 78 54143434 | 28 41434121 | 78 23252121 | 28 52125412 | 78 54543412 |
| 79 32341452 | 29 23434121 | 79 12521214 | 29 23454141 | 79 0 |
| 80 0 | 30 25414123 | 80 34125412 | 30 45412341 | 80 0 |
| 81 23432541 | 31 43214141 | 81 25254145 | 31 52521414 | 81 21214123 |
| 82 43452543 | 32 54341212 | 82 25212545 | 32 0 | 82 52145212 |
| 83 41234123 | 33 0 | 83 25234143 | 33 45454143 | 83 43252341 |
| 84 23214145 | 34 21252321 | 84 21414321 | 34 12345212 | 84 14345252 |
| 85 14145252 | 35 34121254 | 85 0 | 35 0 | 85 45232321 |
| 86 21412321 | 36 0 | 86 54323452 | 36 54545234 | 86 25234145 |
| 87 54325452 | 37 41214341 | 87 0 | 37 0 | 87 23412545 |
| 88 34345252 | 38 23252541 | 88 45234523 | 38 0 | 88 52521452 |
| 89 21212523 | 39 34523212 | 89 54541452 | 39 32541212 | 89 45414341 |
| 90 12521414 | 40 14325452 | 90 0 | 40 0 | 90 43414145 |
| 91 52125214 | 41 0 | 91 32543252 | 41 41214543 | 91 0 |
| 92 0 | 42 41432145 | 92 23454541 | 42 54523432 | 92 52143212 |
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| 94 45234145 | 44 0 | 94 41254341 | 44 23452121 | 94 14325254 |
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| 96 0 | 46 0 | 96 32145412 | 46 45254341 | 96 54523454 |
| 97 14321412 | 47 52325434 | 97 12325252 | 47 52325452 | 97 0 |
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| 03 34543452 | 53 45212145 | 03 54123232 | 53 14123234 | 03 41414521 |
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| 08 14345414 | 58 43214541 | 08 23414341 | 58 25414525 | 08 0 |
| 09 12541234 | 59 41414321 | 09 0 | 59 0 | 09 25254343 |



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Access Control

Continued from page 69

By including the door status switch the system can be told to do one of two things: If the door is not opened within a given amount of time, the relay is deactivated, relocking the door. If the door is opened within that time limit, the relay is deactivated and the door is locked immediately upon its closure. This prevents anybody from following the user through the door before the delay has expired.

Other timing features include windows or segments of time that a user can activate a system. For instance, a janitorial crew can access an office building only between the hours of 10 PM and 11 PM. They cannot activate the system at any other time.

The same office building has a group of office clerks that are allowed access during business hours only. After hours they are unable to activate the system.

The software of smaller systems may only employ a 24 hour or day clock to control a few timing windows. Because these system timers are only for 24 hours they cannot demarcate timing for weekends, vacations, holidays, shutdowns, etc.

More sophisticated systems use a real date and timer clock that include a 24 hour, 365 days a year calendar. These systems use multiple windows that can be ascribed to weekends, holidays, plant shutdowns and any other time frame the user deems useful.

Options

Options generally increase with the sophistication of the system, and a few, such as the alarm and door/lock status features are part of this group.

Options serve two purposes: First, to enhance the integrity and reliability of the system, making it more difficult to violate or compromise the system (e.g. door/lock status switches, alarm points, reader tamper lockout). Second, to offer the user useful ancillary security (timing windows, real date and timer clock, and audit trail).

Not mentioned yet is the lockout feature present on some access systems. This feature shuts a system down after a number of attempts at activating the system have been denied. This option protects the system from being compromised by manipulation of the reader, usually keypads.

Audit trail reports usually include the type of event (i.e. attempted entry, successful entry, system faults, etc.), the date and time the event occurred,

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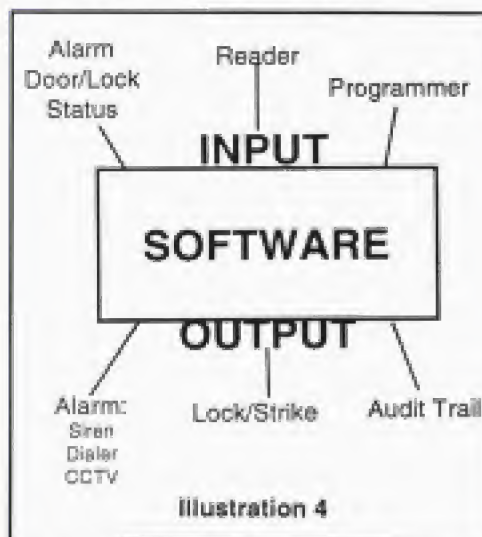
the user alarms, etc. and are usually recorded on a printer or stored on a memory chip for later retrieval to a printer, a liquid crystal display (LCD) or computer screen.

Systems utilizing memory chips to record events for later retrieval of the information, typically hold a given number of events. As a new event occurs the oldest event is deleted from the system. For example, if a system retains memory of the last 128 events, as a new event occurs it is recorded as the most recent event. The oldest event is then deleted from the system to make room for the new event.

The use of the audit trail has been effective in deterring and documenting employee theft and/or vandalism.

Conclusion

All systems include a control panel that serves as the brain, taking input from various sources, analyzing and formulating conclusions through the software and making responses at the output. Understanding the different features and how they can be used to fill the varying security needs of your customer enhances your success in security. (See illustration 4.) §



Electronics Mini-Section

Continued from page 70

from the access control board or alarm panel for the maximum in tamperproof security. Even if the keypad is removed from the wall, it is virtually impossible to simulate Nel-Tech's codes by shorting the wires together.

For single-door access control, the Nel-Tech LKAC-1 controller board will operate any electric lock or strike. Up to three or six doors may be controlled with the new LKAC-3A or LKAC-6A boards.

NATIONAL
AUTO LOCK SERVICE, INC.

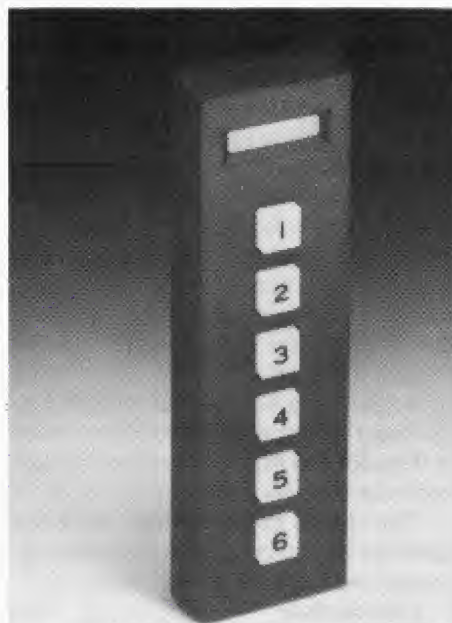
National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

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For custom remote control applications, the LK6P-3A and LK6P-6A controllerboards provide up to six dry-contact relay outputs. Each relay can be selected as latching or momentary when its code is entered. These boards can be used in place of keyswitches for a wide variety of applications. Typical uses include operating overhead garage doors and outdoor lighting, as well as arming of alarm panels and shunting of interior zones.

Nel-Tech's MC-304 alarm control panel features four types of protection loops including instant, delayed, interior, and 24 hour.

All products are in stock for immediate shipment from Nel-Tech's nationwide headquarters. §

For FREE Information
Circle 283 on Rapid Reply

Is Safe Work For You?

Continued from page 84

lock or parts.

As you progress into safe work, you will begin collecting various safe and safe lock parts from damaged safes. I am a firm believer in replacing the entire lock when opening problems occur. But, there are situations where a single lock part can solve the problem. Sargent & Greenleaf sells a Spare Parts Kit. It is a portable 24 drawer cabinet containing over 1,000 S&G safe lock parts. The kit is a little expensive, but contains parts for all of their standard as well as vault locks.

A side line of safe work is safe deposit locks. You will find many of these dual function key locks operating in safes. The most common lock is the



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S&G model 4440. As a locksmith, you may already be servicing these locks. If not, some more education may be required.

Safe work, yes. If safe work is in your future, start off with education. You must know what you are doing or you'll just be wasting time and money. Know your limitations. Tackle only the jobs that you have equipment and knowledge to successfully complete. Purchase only the tools needed for your level of expertise. As you grow in knowledge and experience, then move up the higher technical equipment. Evaluate the market. If your Yellow Pages are full of people offering safe service, or you are operating in a small community, the set up cost may not warrant the income from the amount of work generated.

Safe work, no thanks but... "After serious consideration, involvement into safe servicing isn't within our structure at this time." If this is your feeling, fine, but why not get a piece of the action? Ever notice the ads by your competition offering services you know they don't do? The truth is, they don't perform the service, but they know someone who does! Your competitor has made an agreement with a safe servicing company. He refers all safe calls to the servicing company. In return, he gets a percentage or referral fee, on all work referred by him.

This method can get "your foot in the door" for safe work. It adds to the versatility of your business with no out of pocket expense. The only time spent by you is answering the phone, jotting down the problem, the customer's name, phone number and calling the service company. Most referral fees are based upon 20 percent of the dollar amount of the job. If the customer is a good client of your business, the service company should submit their bill on your invoice. You, in turn, collect your referral fee and return the balance of the invoice amount back to the servicing company.

If you are still a little uncertain about the servicing aspects, consider merchandising a safe line. Select a good brand of safe and stock a small variety of safes suited to your clientele. It will offer you the opportunity to make a sizable profit, and time to get acquainted with safes. Once you have taken the door cover off and peeked inside, it may not be as intimidating as you thought. §

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Bits & Pieces

Continued from page 86

monthly income that requires very little effort.

Congratulations to the Greater Chicago Locksmith Association (GCLA) who recently held its grand opening on a new building purchase. The purchase came after 20 years of planning and waiting and is being used to expand its educational programming. Good job members!

The GCLA currently serves locksmiths from the midwest, including Wisconsin, Illinois and Indiana. Locksmiths with questions may call John Greenan, GCLA President, at 312-486-2030. Or, Kathy Zaniolo, GCLA Vice President, at 708-386-3389. §

Letters

Continued from page 8

Editor's Note: In a perfect world all locksmiths would apprentice in a shop before going into business. In reality, most locksmiths can't find such jobs. They take as much training as possible, go into business, and learn on the job.

Jake Applauded For 'Common Sense' Writing

Dear Marc:

I am a subscriber to *The National Locksmith* and I read and enjoy Jake Jakubowski's articles. They are good common sense writings.

I am writing in response to the article in the January 1993 issue, "All Others Pay Cash." I have no problem tactfully telling people that my services are "cash up front or no service."

There was the time that I did some work at a local high school and told them my terms were C.O.D. It was a bear of a job, and when I submitted my bill I was given the fast shuffle. "The secretary has gone home, we'll send you a check." When the payment didn't arrive and I called them on it they told me that they had other bills to pay, and if they had any money left, they'd pay me. To add insult to injury, they called a short time later to ask me to do more work. I told them I wanted the money that was owed to me up front, plus full payment for the work I was to do, up front. They wouldn't do this, so I wouldn't do the job.

I eventually got paid, but I know now to avoid that situation. You live and learn.

Tom Seager
Michigan



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